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By

Julia M. BURDAJEWICZ

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The research into wall paintings from Porphyreon (present-day Jiyeh), which evolved from a short condition survey into a five-year project and concluded in a doctoral dissertation on which this book is based, was possible with the unceasing support and goodwill of different people and institutions.

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Julia M. Burdajewicz

FOREWORD

Lost and yet saved—the Late Antique wall paintings from Porphyreon (modern Jiyeh) have benefitted from Julia Burdajewicz's excellent work in two fields: research and conservation. Her treatment of these wall paintings has ensured their physical survival for posterity, but much more importantly, her academic research has brought out in full the Eastern Mediterranean visual culture that shaped the surroundings of people living in this region in the 5th–7th centuries.

I first saw the stone blocks with remains of painted plaster stored in the vaults of the Beiteddine Palace in 1995 when I joined some Italian conservators preparing an expertise on the state of preservation of these exceptional finds. The significance of this discovery, made over some time at the seaside location of Jiyeh-Nabi Younes, was clear to me at once. Visiting the Beittedine occasionally over the years, I observed with anxiety a progressing deterioration of their state, as well as of the storage conditions. The opportunity to address this unfortunate situation presented itself in 2014 when Julia Burdajewicz joined the Polish team. She brought to the project an unmatched commitment to research, coupled with a professional competence in conservation matters. The result is this research monograph, treating the wall paintings from a well-rounded archaeological and technological perspective, supported by the author's conservation expertise. The outcome is a unique understanding of this collection in terms of the fundamentals: subject matter, place, and form.

Ever since becoming interested in floor mosaics from the ancient churches of Syro-Palestine I have kept wondering why researchers seldom consider the interior wall and vault decoration of these buildings in their interpretations. After all, they would have been much more in the eye of the beholder than the floors. To a large degree the state of preservation of these remains is responsible: buildings like the basilicas and households of Porphyreon offer little more than the floors, the walls having crumbled into nothingness over the ages.

Wall paintings from the site of Jiyeh-Nabi Younes have been common knowledge ever since the times of Ernest Renan (1864: 510). Indeed, coastal Phoenicia is rich in remains of this kind, many of the tombs from the Roman age (especially around Tyre and Sidon) and the medieval churches (in the northern part of modern Lebanon) still preserving painted wall decoration. Against this background Porphyreon was only one of many secondary towns on the land route between Egypt and Syria, situated centrally between Sidon and Beirut, and a hub for mountain villages like Chhim, excavated by the team at the same time as Porphyreon. It was a place to live and work, to meet and to trade. Theophanes from Hermopolis passed through it in 324 CE, on his way on business from Egypt to Antioch. In 333 CE, the Pilgrim of Bordeaux (*Itinerarium Burdigalense* 18, 21) also stayed there. Moreover, Porphyreon supplied the region with empty amphorae, essential for packing the wine and olive oil produced in the small villages on the coast, like Khaldé near Beirut, and in the mountains, like Chhim (Wicenciak 2016).

From this perspective the fragments of wall paintings from Porphyreon take on exceptional significance. They are at the forefront of Late Antique finds of this kind in the Levant with nothing of similar importance closer than Egypt. Burdajewicz's study of this assemblage has done them justice thanks to a broad scope of research and a comprehensive approach, in terms of the

iconography, architectural context, and techniques of execution. Last but not least, the project involved full conservation treatment thanks to which art, seemingly already lost, is ready for display in a museum environment.

The story of the wall paintings from Porphyreon illustrates the fortunes (or misfortunes) of Lebanese cultural heritage over the past one hundred years. Frequently priceless examples of Phoenician, Greek, and Roman culture, which were discovered during the early period of interest in the antiquities of the region, were left to disintegrate slowly due to carelessness of their caretakers and various contingencies so common in Lebanon's history. It would be infinitely fortunate if other forgotten monuments from this exceptional land shared the happy circumstance of the Porphyreon wall art, their story similarly giving heart to all of its inhabitants.

This monograph is part of a wider undertaking to publish the results of several years of Polish-Lebanese investigations in Chhim and Jiyeh/Porphyreon, prepared jointly by the Polish Centre of Mediterranean Archaeology (PCMA) of the University of Warsaw and the Lebanese Directorate General of Antiquities (DGA). Apart from numerous articles, hitherto published monographs have concerned the local production of pottery in Hellenistic and early Roman Porphyreon, olive oil production in the Levant in Roman-Byzantine times and the pottery discovered at the village site of Chhim (Wicenciak 2016; 2021; Waliszewski 2014). We are, as a team, indebted to all those whose assistance over the past 25 years has made our academic project in Lebanon a success. First and foremost on this list are the dozens of students and professionals participating in the Polish excavations at Jiyeh/Porhyreon.

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Tomasz Waliszewski

ABBREVIATIONS

AHL	*Archaeology and History in Lebanon*
ASAH	*Assaph – Studies in Art History*
AT	*Antiquité Tardive*
BMB	*Bulletin du Musée de Beyrouth*
Bull. épigr.	*Bulletin épigraphique* in *Revue des études grecques*, 1888 ff.
CBM	*Construction and Building Materials*
CIIP	*Corpus Inscriptionum Iudaeae/Palaestinae*
CPG	*Clavis Patrum Graecorum*
DOP	*Dumbarton Oaks Papers*
IGLSyr	*Les inscriptions grecques et latines de la Syrie*, Beirut, then Paris, 1929 ff.
I. Khartoum Greek	A. Łajtar, *Catalogue of the Greek Inscriptions in the Sudan National Museum at Khartoum (I. Khartoum Greek)* (=*Orientalia Lovaniensia Analecta* 122), Leuven–Paris–Dudley, MA 2003
JAIC	*Journal of the American Institute for Conservation*
JAS	*Journal of Archaeological Science*
JLA	*Journal of Late Antiquity*
JCH	*Journal of Cultural Heritage*
LA	*Liber Annuus*
MR	*Μηναῖα τοῦ ὅλου ἐνικυτοῦ*, vol. I–VI, Rome 1888–1902
MV	*Μηναῖα […] διορθωθέντα το πρὶν ὑπο Βαρθολομαίου Κουτλουμουσιανοῦ τοῦ Ἰμβρίου*, vol. I–XII, Venice 1863
PAM	*Polish Archaeology in the Mediterranean*
PG	*Patrologiae Cursus completes, series Greco-Latina*, ed. J.-P. Migne, Paris, 1857–1866, 1880–1903
SC	*Studies in Conservation*
SEG	*Supplementum Epigraphicum Graecum*, Leiden, then Alphen aan den Rijn, then Amsterdam, then Leiden, 1923 ff.
SHAJ	*Studies in the History and Archaeology of Jordan*

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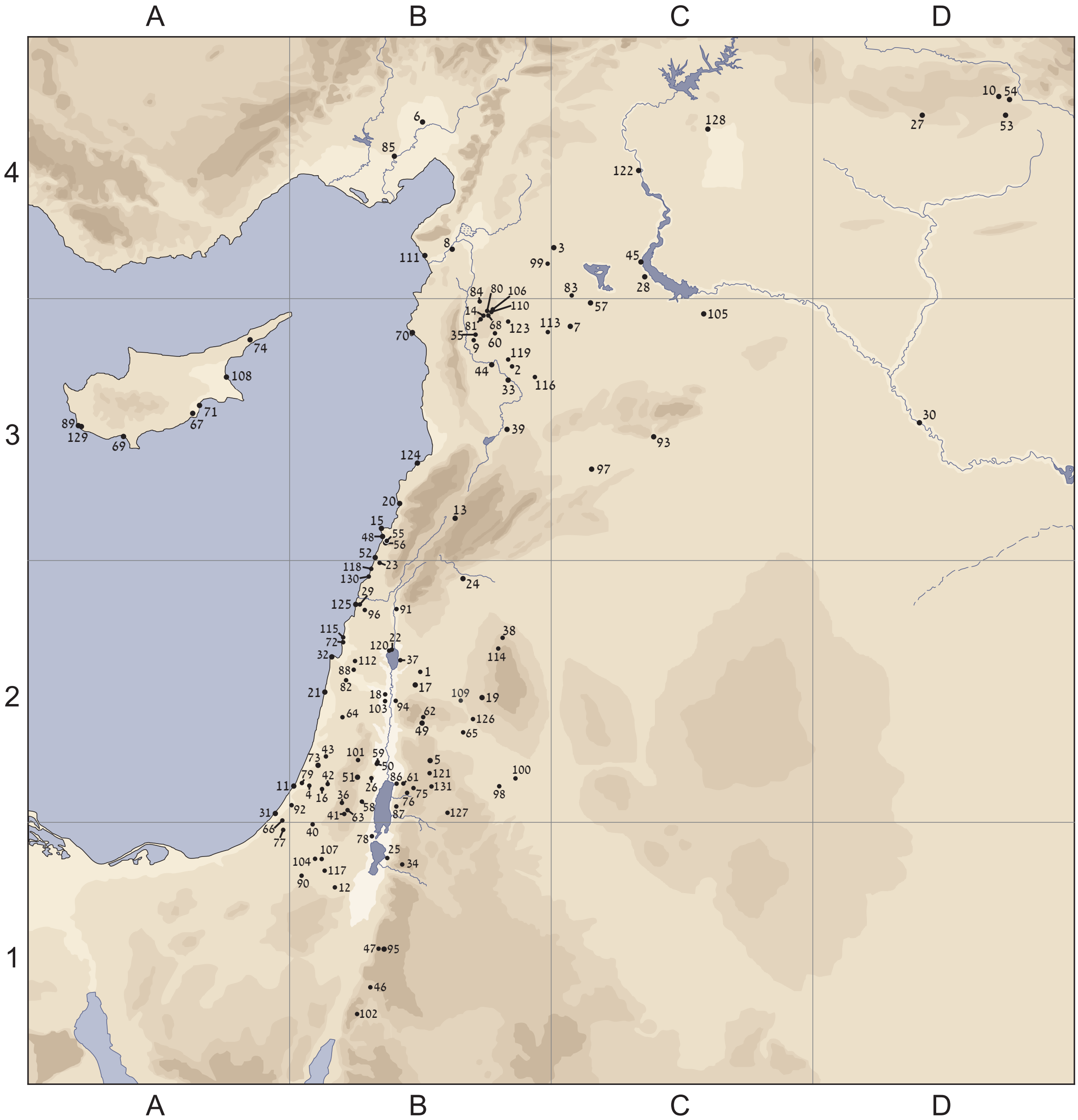
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Map of Syro-Palestine



Map of the Eastern Mediterranean
(for place names see opposite page)

◂

Place names in alphabetical order by modern name; the ancient toponym, if known, is given after the slash, e.g., Aleppo/Beroea.

1 Abila (B2)
2 Ain el-Bad (B3)
3 Aleppo/Beroea (C4)
4 Aluma (B2)
5 Amman/Philadelphia (B2)
6 Anazarbus (B4)
7 el-Andarin/Androna (C3)
8 Antioch (B4)
9 Apamea (B3)
10 Arnas (D4)
11 Ascalon (B2)
12 Avdat/Oboda (B1)
13 Ba'albek (B3)
14 el-Bāra (B3)
15 Beirut/Berytus (B3)
16 Beit Guvrin (B2)
17 Beit Ras/Capitolias (B2)
18 Beth Shean/Scythopolis (B2)
19 Bosra (B2)
20 Byblos (B3)
21 Caesarea Maritima (B2)
22 Capernaum (B2)
23 Chhim (B2)
24 Damascus (B2)
25 Deir 'Ain Abata (B1)
26 Deir Muqallik (B2)
27 Deir Za'faran (D4)
28 Dibsi Faraj (C4)
29 Djel el-Amad (B2)
30 Dura-Europos (D3)
31 Gaza (A2)
32 Haifa (B2)
33 Hama/Epiphania (B3)
34 Hammam 'Afra (B1)
35 Hawarte (B3)
36 Hebron (B2)
37 Hippos-Sussita (B2)
38 Hit (B2)
39 Homs/Emesa (B3)
40 Horvat Karkur (B1)
41 Horvat Ma'on (B2)
42 Horvat Midras (B2)
43 Horvat Tinshemet (B2)
44 Houad (B3)
45 Houeidjit Halaoua (C4)
46 al-Humayma (B1)
47 Jabal Harun (B1)
48 Jenah (B3)
49 Jerash/Gerasa (B2)
50 Jericho (B2)
51 Jerusalem (B2)
52 Jiyeh/Porphyreon (B3)
53 Kartmin (D4)
54 Kefr Zeh (D4)
55 Khaldé-Choueifat (B3)
56 Khan Khaldé (B3)
57 Khanasir/Anasartha (C3)
58 Khirbet ed-Deir (B2)
59 Khirbet el-Mafjar (B2)
60 Khirbet Moûqa (B3)
61 Khirbet al-Mukhayyat (B2)
62 Khirbet Munyah (B2)
63 Khirbet el-Quneitira (B2)
64 Khirbet Samara (B2)
65 Khirbet es-Samra (B2)
66 Kissufim (A2)
67 Kiti (A3)
68 Kōkaba (B3)
69 Kourion (A3)
70 Latakia/Laodicea (B3)
71 Livadhia (A3)
72 Lohamey haGettaot (B2)
73 Lod/Lydda (B2)
74 Lythrankomi (A3)
75 Madaba (B2)
76 Ma'in (B2)
77 Ma'on (A1)
78 Masada (B2)
79 Massu'ot Yitzhaq (B2)
80 Mēgāra (B3)
81 Meğeleyya (B3)
82 Meggido (B2)
83 Mektébé (C4)
84 Mezra'a el-Oulia (B3)
85 Misis-Mopsuestia (B4)
86 Mt. Nebo (B2)
87 Muqawir/Machareus (B2)
88 Nazareth (B2)
89 Nea Paphos (A3)
90 Nitzana/Nessana (B1)
91 Omrit (B2)
92 Or haNer (B2)
93 Palmyra (C3)
94 Pella (B2)
95 Petra (B1)
96 Qabr Hiram (B2)
97 Qasr el-Heir el-Gharbi (C3)
98 Qasr al-Kharrana (B2)
99 Qinnesrin/Chalcis (B4)
100 Qusayr Amra (B2)
101 Ramallah (B2)
102 er-Rashidiya (B1)
103 Rehov (B2)
104 Rehovot-in-the-Negev (B1)
105 Resafa (C3)
106 Rouweīḥa (B3)
107 Sa'adon (B1)
108 Salamis (A3)
109 Sameh (B2)
110 Schnaan (Šnân) (B3)
111 Seleucia Pieria (B4)
112 Sepphoris (B2)
113 Sara (Serā) (B3)
114 Shahba/Philippopolis (B2)
115 Shavei Zion (B2)
116 Sheykh 'Ali Kasoun (B3)
117 Shivta/Sobota (B1)
118 Sidon (B2)
119 Soran (B3)
120 Tabgha/Heptapegon (B2)
121 Tall Jawa (B2)
122 Tell Amarna (C4)
123 Tell Minnis (B3)
124 Tripolis (B3)
125 Tyre (B2)
126 Umm el-Jimal (B2)
127 Umm er-Rasas/Kastron Mefa'a (B2)
128 Urfa/Edessa (C4)
129 Yeroskipou (A3)
130 Zahrani (B2)
131 Zizia (B2)


Alexandria
Karm al-Ahbariya
Marina el-Alamein
Abu Mena
Kellia
Cairo
Saqqara
Fayum
Mt. Sinai
Antinoe
Bawit
Wadi Sarga
Sohag
Amheida

Map of Egypt

INTRODUCTION

"Une Pompéi byzantine" is how the coastal site of Porphyreon, present-day Jiyeh in southern Lebanon, was described by one of its early explorers, Roger Saidah (1977). The comparison may be somewhat hyperbolic but it was, and still is, entirely justified considering the abundance of finds of Late Antique wall paintings unmatched at any other archaeological site in the Roman provinces of Palaestina, Syria, and Arabia.[1] The nearly 300 fragments of painted representations of jeweled crosses, human figures, animals, plants, geometric motifs, and painted inscriptions stand out among the otherwise barren landscape of Late Antique mural art from the Eastern Mediterranean.

The paintings decorated the walls of a large basilica church and residential complexes at Jiyeh/Porphyreon. They were discovered between 1975 and 2014 by three different teams.[2] The first batch was brought to light by Roger Saidah who, on behalf of the Lebanese Directorate General of Antiquities (DGA), excavated the residential district of Porphyreon in 1975 (Saidah 1977). In 1987, a team organized by the then Minister of Public Works, Transport, and Tourism Walid Joumblatt, and coordinated by Syrian restorer George Nahas, found another set of fragmentary wall paintings while exploring a large early Christian basilica. Finally, at the beginning of this century, the site was studied once again by a joint Polish-Lebanese archaeological expedition led by Tomasz Waliszewski from the Polish Centre of Mediterranean Archaeology (PCMA) of the University of Warsaw. The set of wall painting fragments unearthed at the time came from the residential district.

None of the assemblages was ever studied or even properly documented upon discovery. In the turmoil of the Lebanese Civil War that broke out soon after Saidah began excavating, a major part of the excavation documentation was destroyed or lost, along with the wall paintings that he discovered. The continuing conflict did not favor any kind of scholarly examination of the material discovered during the exploration of the basilica in 1987.

The state of preservation of the paintings discouraged research even after the socio-political situation had improved. The paintings are fragmentary, preserved as patches of painted plaster fixed to ashlars and stones from the collapsed building walls, making them difficult to handle, examine, and interpret. Unrecorded or poorly recorded, and unstudied, they were gradually moved from the site and secured in a storage room at the Beiteddine Museum in the Chouf Mountains, where they remain to this day.

[1] The paintings are dated roughly to the 6th century. Being aware of the different nomenclature concurrently used for the period in question (Late Antique, Early Byzantine, or Byzantine, with the last being common in countries that submitted to Islamic rule in the 7th century), the author has chosen to refer to it as Late Antiquity, influenced in this by the results of the iconographic study. With the exception of the depictions of crosses, the paintings in question derive from a Graeco-Roman visual culture and retain its spirit. For a discussion of the periodization of the 1st millennium CE and the concept of Late Antiquity see Marcone 2008; 2020; James 2008; Ando 2008; Inglebert 2012; Cameron 2016.

[2] For a detailed history of the site and its excavation see *§ 2.2*.

The author assessed the state of preservation of the wall paintings stored in the Beiteddine Museum in 2014, responding to a request made by Waliszewski on behalf of the PCMA-DGA archaeological expedition to Jiyeh. Waliszewski was also interested in evaluating their potential as study material. The unique character of this assemblage was immediately evident. The wall paintings from Porphyreon constitute an unprecedented, albeit poorly preserved, collection of fragmentary mural decorations from Late Antique houses and a church. As such, they merited a thorough, multi-aspect study, and this book is an outcome of this research.

Very few examples of Late Antique wall paintings survive. They are usually fragmentary, discouraging or even impeding iconographic or stylistic studies, while their appeal for specialist archaeometric analyses is limited because of their simple technique of execution. This deficiency of the material evidence, alongside a limited interest in the remains of Late Antique wall paintings, belies the attention paid to Roman[3] and Byzantine and medieval painted art.[4] This imbalance has left a significant gap in the knowledge of artistic and technical developments in the art of wall painting, spanning a period from the end of the Roman to the post-iconoclastic period (4th to 8th centuries CE). The wall paintings from Porphyreon significantly expand the modest corpus of Late Antique wall paintings from the southern Levant, and thus help to bridge that gap.

Working with the wall paintings from Porphyreon was a painstaking and challenging task for a number of reasons. First, because of the reported scarcity of material evidence and the scant published reference material. This book thus begins with an overview of surviving examples of Late Antique wall paintings in the Levant and historical sources that mention such decorations, making a case for the uniqueness and importance of the fragments from Porphyreon, an importance not immediately apparent because of their fragmentary state.

Moreover, the author was faced with a truly formidable investigative task, constrained to deal with a long, complex and at times turbulent history of the explorations at Jiyeh, coupled with missing and incomplete documentation of these works. The story of the explorations presented in Chapter 2 facilitates an understanding of how the circumstances of discovery affected study possibilities and why many questions, concerning, for example, the exact architectural context, will likely never be answered. Certain ambiguities surrounding the mosaics from the basilica are analyzed as well, as they may have consequences for the correct dating of the basilica, and thus of the paintings. The chapter also presents a chronology of the basilica and the houses, as well as a description of the architecture and of the construction techniques employed.

[3] References are too numerous to be listed here. One should cite the classic works of Alix Barbet (1985) and Roger Ling (1991), and the triennial conference proceedings of the Association Internationale pour la Peinture Murale Antique and its bulletin (*Apelles*). On Roman wall paintings specifically from the Eastern provinces there are, for example, the works of Alix Barbet and Claude Vibert-Guigue (Barbet and Vibert-Guigue 1988–1994; Barbet 1995), those of Silvia Rozenberg (1981; 1997; 2011), and publications devoted to individual finds, such as the necropolises of Sidon (Dunand 1965), Palmyra (Eristov and Vibert-Guigue 2019), Beit Ras (Zayadine 1976) and Gerasa (Eristov and Vibert-Guigue 2013). In addition, countless archaeometric studies of Roman wall paintings from every corner of the Empire have been produced in the past 40 years.

[4] For medieval and Byzantine wall paintings in the East see Winfield 1968; Stylianou and Stylianou 1997; Carr 2008 (including references to academic works on Byzantine wall paintings in Cyprus); Immerzeel 2009; Seligman 2012; Waliszewski et al. 2013; Ousterhout 2017.

The plastered masonry constituted a substrate for the wall paintings. The fact that the paintings were found still preserved on their original structural supports (ashlars and stones from the collapsed walls) instead of in the form of loose fragments in the rubble, which is more common at archaeological excavations, created an opportunity to carry out a comprehensive technical investigation, encompassing the entire process from the preparation of the mortars for the substrate to the final touches of the paintbrush. By contrast, most modern archaeometric studies focus either on mineral substrates or on the pigments and painting techniques. The results of macroscopic and microscopic observations of workshop features and chemical and instrumental analyses of the collected samples are presented and discussed in Chapter 3. The findings of the archaeometric study, compared with the means and materials applied in the Roman wall painting tradition, trace the technical shifts between the Roman period and Late Antiquity, shedding some light on the scarcely explored subjects of workshop practices and the know-how of Late Antique painters.

The condition of the wall paintings was severely affected by a variety of factors: select aspects of the execution technique, the environmental conditions at the site, the complicated history of explorations at Jiyeh, and the treatment after discovery. This largely determined and limited the capability to study and understand these finds. Conservation treatment, vital to halt an already advanced and progressing deterioration of the painting substance, was also seen as an essential prerequisite to an iconographic and stylistic study. For example, cleaning disfiguring deposits of dirt and discolored varnish from the painting surface facilitated an interpretation of the depictions and examination of painterly style. An account of the accompanying Conservation Project in Chapter 4 gives an overview of the state of preservation of the fragments at the outset of the research project and discusses the different primary and secondary deterioration processes and their underlying causes. A sequential presentation of the conservation treatment follows, thus giving readers an all-rounded perspective of the current condition of this ensemble.

The treatment notwithstanding, the assemblage continued to recall a jigsaw puzzle more than anything else, with more pieces missing than present. Some of the poorly preserved fragments remained difficult to interpret. Each individual fragment or, in rare cases, sets of fragments constituting a single depiction, needed to be studied first, before the assemblage as a whole could be approached in a synthetic way. Identifying and interpreting particular depictions was an especially challenging task for lack of parallels—not many Late Antique wall paintings have survived. In order to study elements of iconography and style, it was necessary to resort to motifs identified in Roman wall painting, Late Antique floor and wall mosaics, illuminated manuscripts, and the minor arts (metalwork, ivories, etc.). The study assigned particular depictions either confidently or tentatively to one of seven iconographic groups (crosses, geometric motifs, human figures, animals, vegetal motifs, inhabited scrolls, and genre(?) scenes in a distinctive linear and monochrome style). These are discussed in Chapter 5, referring to the accompanying catalog for details on particular fragments and in juxtaposition with parallels from both the monumental and the minor arts. Fragments of painted inscriptions are discussed in a separate section at the end of the chapter. Fragments that could not be assigned to any of the groups due to their poor state of preservation have been listed separately at the close of the chapter.

The presentation of sound evidence for the proposed interpretations enabled a synthesis and discussion of the overall iconographic programs or compositional schemes. A broader context of

the wall paintings from Porphyreon: architectural, iconographic, semantic, stylistic, and chronological, is evoked in Chapter 6. It is at this point that the adopted threefold approach to the paintings, combining technical investigation and a presentation of the conservation project with an iconographic and stylistic study, demonstrated its significance. For example, certain characteristics of the technique of execution, alongside evidence of past conservation treatments, were useful in pinpointing the approximate setting of some of the fragments within the basilica. Since technique has a significant influence on the appearance of an artwork, in some cases careful examination of the paint layer buildup allowed a grouping of fragments by style.

Evidence from Late Antique visual arts and historical sources has contributed to a discussion of tentative overall iconographic programs deployed in the basilica and in the houses, explaining meanings of particular paintings and suggesting possible compositional schemes. Special attention is paid to the role of painted inscriptions in ecclesiastical and domestic spaces. Moreover, the combination in one building of preserved evidence of wall decoration (paintings and marble revetment) and tessellated floors allowed the decoration of the basilica in Porphyreon to be examined in its entirety, a rare case considering how often nothing but floors survive from the Late Antique churches. The wall paintings are discussed in the context of the overall interior decoration of the church, leading to a discussion of aesthetic relations and the exchange of motifs between the walls and the floor.

A close stylistic study of the wall paintings shows the presence of several different painting styles, the "hands" of the artists, and their varying levels of proficiency. Even though analyzing the style of such fragmentarily preserved artworks is a tricky task, a few cautious observations on the painterly style of the wall paintings from Porphyreon place them within the framework of style development seen in other media of Late Antique art, especially the floor mosaics.

An analysis of the body of evidence—archaeological data, mosaic inscriptions, style and iconography of the wall paintings, and technical observations—leads to a proposed dating of the wall paintings from Porphyreon.

All the fragments covered by the study are presented in the form of a catalog reflecting the trifold character of the research: each entry contains identification of the motif/subject depicted on a given fragment, its technical features, condition at the outset of the project, and conservation treatments applied.

This book has been prepared in lieu of a public display of the wall paintings from Porphyreon stored at the Beiteddine Museum for which there is little hope in the immediate future. It will hopefully reach a broader public, including scholars, presenting many pending questions and tentative answers regarding the interpretation, meaning, function, authorship, and chronology of the wall paintings from Porphyreon. Thus, the concluding remarks are intended more as an invitation to further considerations of the assemblage from Porphyreon, and more broadly of the much-underexplored subject of Late Antique wall paintings in the Eastern Mediterranean and their special role as descendants of Roman painting and forerunners of Byzantine art.

Chapter 1

LATE ANTIQUE WALL PAINTINGS FROM THE LEVANT: MATERIAL AND WRITTEN EVIDENCE

1.1 Archaeological evidence

Fragments of painted plaster found in archaeological contexts testify to the importance of wall paintings as a form of interior decoration of Late Antique buildings, churches in particular, in the Levant. However, current knowledge of Late Antique monumental art in this region is dominated by an enormous corpus of mosaic pavements discovered over the years. The fact that floor mosaics are often preserved in fair condition, better than the more vulnerable wall paintings which hardly ever survive to our times, distorts modern perception of the appearance of Late Antique interiors. The difference in perceptions of interiors between the 6th century and today is best revealed in *Laudatio Martiani* by Choricius of Gaza, one of the most renowned and detailed accounts of wall decorations in 6th-century churches (*LM* I, 17–76; *LM* II, 28–54). Overwhelmed by the beauty of the wall paintings, wall mosaics, and marble wall revetment of the Churches of St Stephen and St Sergius at Gaza, Choricius ignores the flooring. Meanwhile, the perspective of the modern scholar is just the opposite. Floors are the focus because there are no walls to look at, unlike the 6th-century worshippers who would have looked up and around before casting their eyes down onto the floors. Hence one is hardly surprised to read in Rina Talgam's monumental work on floor mosaics in the Holy Land: "Floor mosaics were the principal decorative medium in this period" (Talgam 2014: 178). Discoveries of polychrome mosaic pavements open an extensive array of research paths: stylistic studies, epigraphic studies on inscriptions executed in *tessellatum*, investigation of execution techniques and workshop practices, typology and dissemination of decorative patterns and iconography, comparative studies, and more. The outcome is an overwhelming number of comprehensive and selective studies devoted to Late Antique mosaic floors from the ancient provinces of Palaestina, Syria, and Arabia.[1]

Meanwhile, the body of knowledge on the art of wall painting in the Late Antique period in the Eastern Mediterranean is limited and uneven, in terms of both geographic distribution and dating of the finds. Best known are the wall paintings from the monasteries of Bawit, Saqqara, and Sohag in Egypt, dated generally to the 6th–7th centuries (Clédat 1904; 1906; 1916; Rassart-Debergh 1981; 1982; Rutschowscaya 1992; Zibawi 2003: 72–104; Bolman 2016a). While these wall paintings are of great use for the study of early Christian iconography and give an idea of the mural decoration of the interiors of the earliest churches, they were created under the strong influence of the artistic traditions of Middle and Upper Egypt and, therefore, should not be considered as representative of all of the provinces in the Eastern Mediterranean.

[1] For example, Chéhab 1957; 1959; Donceel-Voûte 1988; Piccirillo 1997; Hachlili 2009; Merrony 2013; Madden 2014; Talgam 2014; Hélou 2019, and countless works devoted to mosaics from particular sites.

1.1.1 Sepulchral wall paintings

The earliest wall paintings from the ancient provinces of Palaestina, Syria, and Arabia, featuring strictly Christian content, appear in the context of sepulchral art dated to the 4th and 5th centuries.[2] However, in contrast to the elaborate and complex pictorial programs of the Hellenistic and Roman necropolises of the Levant,[3] examples of early Christian sepulchral art are modest both in quantity and in artistic quality. The iconography is usually constrained to symbolic motifs and depictions of crosses; biblical scenes are featured only occasionally. The paintings are very often monochrome, which may be a consequence of patrons having limited financial resources or there being too few high-class painters' workshops around in the region to carry out commissions.

Simple, practically monochrome wall paintings were found in a rock-cut tomb with three large arcosolia discovered in the early 20th century in Beit Guvrin, about 20 km northwest of Hebron (Moulton 1921–1922). The rear walls of the two lateral arcosolia were decorated with stylized floral designs in red, while the arcosolium across from the entrance featured a very simplistic depiction of a cross inside a wreath, flanked by two other crosses. The spandrels above each of the arches featured depictions of two symmetrically arranged birds: roosters flanking a red cross on the right side, peacocks above the central arcosolium, and unidentified birds on the left (Moulton 1921–1922: Pls 1–4). Another tomb from the late 4th–early 5th centuries discovered in Beit Guvrin, the Tomb with Two Busts, featured painted decoration, monochrome red in color and of similar simplicity, composed of schematic depictions of crosses in wreaths, male and female busts, palm branches, fish, chalices, and floral motifs (Michaeli 2009: 110–126).

Much of the sepulchral decoration consisted solely of depictions of crosses. Two crosses decorated with simple rosettes and floral motifs, one within a medallion and the other within a rectangular frame, were depicted in dark gray paint on the walls of a burial cave in Rammun, east of Ramallah (Taha 1998: 338–339). Depictions of simple red crosses were found in tombs at Ein Karem (Saller 1946: 73–76) and Horvat Midras (Kloner 1978). A hypogeum at Homs/Emesa[4] was decorated with inscriptions and crosses in medallions (Du Mesnil du Buisson and Mouterde 1929). Above each of the four sarcophagi there was a *tabula ansata* with an epitaph, painted in red or black paint; above the inscriptions were jeweled crosses, some with the *alpha* and *omega*, depicted schematically inside medallions decorated with colorful gemstone-like roundels. A niche located on the east wall of the hypogeum contained a depiction of a jeweled cross with pendilia and was flanked by two painted pilasters supporting an arch decorated with a lotus-band motif [see below, *Fig. 5-4* left]. Another medallion with a jeweled cross was depicted above the niche. The four epitaphs contain dates falling between 459 and 514.

Probably the most elaborate pictorial program from a Palestinian sepulcher is the one found in the Tomb with a Biblical Scene in Lohamey haGettaot in Western Galilee (Michaeli 2009: 131–147). The wall paintings, dated to the end of the 4th century or the beginning of the 5th, depict Daniel between the lions [see below, *Fig. 5-63*], a red cross with an *alpha* and *omega* set within a large,

[2] With the exception of the wall paintings from the house-church at Dura-Europos (mid-3rd century; Peppard 2016: 16).

[3] For example, in northern Jordan: Barbet and Vibert-Guigue 1988–1994; Tyre: Dunand 1965; Sidon: Barbet, Gatier, and Lewis 1997; Ascalon: Ory 1939.

[4] If the ancient toponym is known, place names are given as follows: present-day name/ancient toponym.

leafy wreath, a cross on a mount (Golgotha?), and a number of motifs that are not explicitly Christian: two candelabra, palm and pomegranate trees [see below, *Fig. 5-52*], shrubs with red flowers, an inhabited scrolls motif, a vase with a springing vine populated by birds of different species, and two bunches of three fish each hanging from a hook in the form of a painted nail [see below, *Fig. 5-42*].

The pictorial program of the Jabal al-Joufa burial cave in Amman/Philadelphia was also quite complex: the main arcosolia were flanked by depictions of Christ Healing a Blind Man and the Raising of Lazarus. There was also a depiction of a cross in a wreath with grape-laden vines growing from it (Zayadine 1985: 153, Fig. 9). A Christian funerary portrait of a woman (also interpreted as the image of the Virgin) in an imago clipeata and schematized depictions of jeweled crosses, both inside the loculi and on the external wall of the tomb, were found at the necropolis of Tyre (Chéhab 1985: 620–621, 630–631, Pls CXXIX, CXXX) [see below, *Fig. 5-30* left].[5] Two painted inscriptions, featuring Psalms 3:6 and 62:2–3 (63:2–3)[6] enclosed in wreaths, decorated the ceiling of a chamber tomb at the same necropolis (Walser 2015).

Recent excavation in Tomb M33 at the Kale Eteği necropolis in Urfa/Edessa brought to light relatively well-preserved wall paintings dating from the 4th–6th centuries (Çetin et al. 2020: 133–136, Figs 11–12). Framing one of the tomb's three arcosolia are two painted columns with schematized fluting and stylized capitals that support a decorative band lining the curved edge of the arcosolium. Below the arcosolium, two female figures (one partly preserved) hold a *tabula ansata* with a Greek inscription commemorating a certain Akibsima and his family. There is a small red cross above the *tabula ansata* and a wreath with a cross below it; the better-preserved figure holds a cross on a long rod. The figures are flanked by two orthostates of faux orange marble. A *tabula ansata* with a Greek inscription in memory of Patrōinos and his family decorates the arcosolium on the opposite side of the burial chamber (Çetin et al. 2020: 136–137, Fig. 13).

1.1.2 Wall paintings in churches

Sepulchral wall paintings from later than the 5th century are rare. Around that time painters seem to have shifted the primary field of their attested activity from tombs to ecclesiastical interiors. However, despite the vast number of churches discovered across the provinces of Palaestina, Syria, and Arabia, wall paintings are seldom found and, as will be shown below, are very fragmentary.

One of the examples complete enough for the subject to be recognized comes from the Southern Church at Shivta/Sobota in the Negev where a Transfiguration scene was depicted in the southern apse. However, it was severely damaged and faded already at the time when first described by Charles L. Woolley and Thomas E. Lawrence (1936: 105–106). The remains of the painting, presumed to be from the early 6th century, were studied some 70 years later by Pau Figueras (2006–2007). Recent visible induced luminescence (VIL) analyses revealed remains of blue pigment, shedding new light on the iconography of the depiction (Linn, Tepper, and Bar-Oz 2017).

Figural depictions were attested in the apse of the Church of the Priest Wa'il at Umm er-Rasas/Kastron Mefa'a, dated by a mosaic inscription to 586. A sitting bearded saint holding a book was

[5] Chéhab dates the early Christian monuments of the necropolis from the last quarter of the 3rd century to the first quarter of the 4th (Chéhab 1978: 161).

[6] Septuagint numbering is used in this volume; the Masoretic numbering, if different, is given in parentheses.

represented on the right-hand side of the semi-dome of the apse; a series of small medallions containing birds marked the edge of this depiction (Piccirillo 1993: 318, Figs 13–14, Col. Pl. V; Acconci 1996). Remains of painted plaster with a representation of haloed figures in long garments were found still on the wall of the northern pastophorion of the Southern Church at Avdat/Oboda (Negev 1997: 132–133).

Another set of identifiable subjects comes from the cave church complex of the Monastery of St Theoctistus (Deir Muqallik). Included is a bust of Christ, imitation of marble revetment, a painted wall hanging, a scene of the Ascension(?), and a relatively well-preserved painted inscription above the opening leading to the burial complex (Goldfus, Arubas, and Alliata 1995: 265, 272, 279–280, 283, Figs 10–12, 16). The paintings, pertaining to two different phases of construction of the monastery, are dated to the 5th–7th centuries.

In Resafa, wall paintings were found in a two-story chapel added to the southeastern corner of Basilica A during the second phase of its occupation (probably in the second half of the 6th century).[7] Depicted in the semi-dome of the chapel's apse is a sizeable, even-armed cross with diagonal rays, placed inside a medallion and surrounded by swirling scrolls [see below, *Fig. 5-56*]; remains of geometric designs could be seen on the under-arches of several windows [see below, *Fig. 5-17*]. The lower part of the north wall still bore traces of painted imitations of marble paneling (Ulbert 1986: 87, 91–93, Figs 52, 56a–d, 57, Pls 33.1, 36.2).

Other published examples of remains of wall paintings from Late Antique churches are limited either to single representations or fragments that are difficult to interpret and do not say much about the overall iconographic program decorating these buildings. In the Sanctuary of Lot at Deir ʿAin Abata, a red cross was depicted on one of the columns in the church, while small fragments found in the debris testified to the presence of human representations (6th–7th centuries; Politis 2012: 369, Col. Pls 44–46). A fragment of a face and a number of pieces of plaster bearing geometric patterns were discovered in a room adjacent to the southern aisle of the Northern Church at Rehovot-in-the-Negev (Tsafrir 1988: 64–67, Figs 94–97).

Geometric and floral designs were found at Khirbet ed-Deir in a context dated to the 5th/6th–early 7th centuries and at Khirbet el-Quneitira (Ben-Arieh 1999). Simple geometric designs and medallions with equal-armed crosses decorated cells and a chapel of the rock-cut hermitage at Hammam ʿAfra (5th–6th? century; MacDonald 1980; Vibert-Guigue 2016: 340).[8] Geometric designs were attested also in the North-West Church at Hippos-Sussita, which was in use from the 6th century until its destruction in 749 (Burdajewicz 2017). The vast majority of the fragments of painted plaster collected from the debris came from the areas of the martyrion and diaconicon of the church, suggesting that the prominence of these spaces was emphasized with painted images. Excavators at Kursi reported that "almost all the interior walls of the basilica were decorated with painted plaster, and on some walls large fragments remained intact" (Tzaferis 1983: 9), yet they published only one photograph of a painting, featuring a black-and-white chevron design, from the nearby Chapel of the Miracle of the Swine (Tzaferis 1983: Pl. XIX.1–2). The lowermost register of the apse in the south basilica (known as the Church of Archbishop

[7] For the most recent discussion on the chronology of Basilica A and other buildings at Resafa see Gussone and Sack 2017.

[8] Most of the decoration was executed directly on rock; only a few depictions were painted on the plaster.

Photios) at Hawarte was decorated with a painted imitation of marble revetment (Canivet 1982: 316–317). Similar designs and a fragmentary figural depiction were preserved on stone blocks found incorporated in a foundation wall of the basilica, which, according to Canivet, may have come from an earlier, late-4th-century church (Canivet 1982: 319–320; Gawlikowski 2012: 489).

A depiction of a wall hanging with floral motifs was found in the "venerated hall" of the *domus ecclesiae* in Capernaum (4th century; Testa 1972: 13–48; Corbo 1975: 66–70). A fragmentarily preserved depiction of a wall hanging with fringes adorned the apse of the church at Ma'in (Piccirillo and Russan 1976: 61, Pl. XXIV). A fragment of a medallion and simplistic depictions of plants with red flowers survive in the Grotto of Conon in Nazareth (4th–5th centuries; Briand 1982: 31).

The only depictions of animals coming from a non-sepulchral context were found in the narthex of the church at Zahrani. Two ashlars with patches of painted plaster showed a bird adoring a cross and a bird facing a wreath, presumably with a cross inside it (Chéhab 1957: 91; 1959: Pl. XLII) [see below, *Fig. 5-5*].

A few sites yielded fragments of painted inscriptions. An almost complete text comes from the Church Complex of St Stephen at Umm er-Rasas/Kastron Mefa'a. It contains four lines from Psalm 33 (34) inscribed in a painted *tabula ansata* (Piccirillo and Alliata 1994: 263–264, Pl. XXVI). Painted verses of Psalm 90 (91) were discovered in the southern pastophorion of the Jabal Harun Church in Petra (Frösén, Sironen, and Fiema 2008: 279–280; Col. Pl. 53). A *tabula ansata* containing a dedicatory inscription was also preserved on the wall of the Urn Tomb Church at Petra (Leatherbury 2019: 108–110, Fig. 3.18; in this case, the inscription was executed not on plaster but directly on the stone wall). The said painted epitaph of the monks from the Monastery of St Theoctistus featured two quotations from the Gospel of John (11:32 and 11:43; Goldfus, Arubas, and Alliata 1995: 283–283).[9]

Indecipherable fragments of painted inscriptions were also found in the Propylaea Church at Jerash/Gerasa (Del Corso and Mastrogiacomo 2007), at Rehovot-in-the-Negev (Tsafrir 1988: 178–182, Fig. 270), and in the North-West Church at Hippos-Sussita (Burdajewicz 2017). A remarkable assemblage of painted inscriptions, from a synagogue rather than a church, was discovered at Rehov. Hundreds of small fragments recovered from the rubble were meticulously reassembled into painted inscriptions related to the life of the community and its religious practices (Vitto 2015). The paintings also included non-textual elements: wreaths around inscriptions, a fish(?), a menorah, a Torah shrine or temple façade, and an apparent imitation, schematically rendered, of a coffered ceiling. The paintings have been dated to the 5th–7th centuries.

One of the better-preserved examples of Late Antique wall paintings in the Levant came not from a church but from two vaulted chambers of uncertain purpose uncovered in Caesarea Maritima (possibly adapted for a chapel?). The rooms were decorated with representations of three orans saints and Christ among the Twelve Apostles, and are dated on stylistic and iconographic grounds to the late 6th or early 7th century (Avner 1999) [see below, *Fig. 5-31*].

[9] Meriting mention in this context is a cistern converted into a chapel located in Salamis on Cyprus, which was decorated with inscriptions featuring passages from Psalm 28:3 (29:3), possibly from Psalm 120:7 (121:7) and 2 Kings (2:21), appellations to Christ, St Barnaba, St Epiphanius, Constantine, and the cross. The decoration of the chapel also featured a small imago clipeata of Christ and a horizontal panel with a Nilotic landscape [see below, *Fig. 5-38*] (Sacopoulo 1962).

1.1.3 Wall paintings in domestic and public spaces

Remains of wall paintings from non-ecclesiastical and non-funerary contexts were attested at just a few sites. At Tall Jawa (about 10 km south of Amman), fragments of plaster with a small red cross, Greek letters, and geometric motifs in red, yellow, orange, brown, and black were discovered in residential Building 600 from the early Islamic period (Johnson 2010a: 358–360, Fig. 11.1:3; 2010b). In the West Acropolis Mansion at Madaba, one of the rooms had a small, plastered niche decorated with yellow, red, and black designs; the whole complex yielded numerous fragments of painted plaster, some of which could be partly restored as a depiction of a cross, and Greek inscriptions, too fragmentary to be read (mid-6th to mid-8th century; Foran 2007, 116, 118, Fig. 4:7–9). Pieces of plaster painted in different colors were also found in House G at Pella (mid-6th to mid-8th century; Walmsley 2008: 251), and in the House of the Scroll in the northwestern quarter of Jerash/Gerasa (first half of the 8th century; Lichtenberger et al. 2016: 332; Lichtenberger and Raja 2019: 60–61), yet in both cases they were too poorly preserved for the motifs to be recognizable.

Wall paintings surviving from public buildings include a depiction of a *crux gemmata* and some fragments of painted inscriptions that were found in one of the warehouses in Caesarea Maritima (Patrich 1999: 78; Di Segni 2000) [see below, *Fig. 5-4* right], and a depiction of a jeweled cross and a Tree of Life from the baths in the city's suburbs (Horton 1996: 179, Fig. 2). A red cross surrounded by clumps of green plants decorated a niche in the Western Baths at Beth Shean/Scythopolis (Saradi 2006: 330) [see below, *Fig. 5-3*].

1.1.4 Other sources

The material evidence is obviously deficient considering the brevity of this listing of published remains of Late Antique wall paintings from the provinces of Palaestina, Syria, and Arabia. The patchwork of decorative motifs coming from a handful of sites gives little more than a vague idea of the pictorial programs adorning Late Antique buildings, notably churches. So far, a comprehensive approach to the issue of the interior decoration of Palestinian churches and synagogues has been made only by Fanny Vitto (1995; 2019). The fragmentary nature of these finds precludes stylistic or iconographic studies, which were possible only in the case of the figural depictions from Caesarea Maritima (Avner 1999) and the Transfiguration scene from Shivta/Sobota (Figueras 2006–2007).

A few surviving examples of wall mosaics from the pre-iconoclastic period may supplement this spotty archaeological evidence of the wall decoration of Late Antique churches.[10] One should list here the mosaic of the Transfiguration at the Monastery of St Catherine in Sinai (mid-6th century; Forsyth 1968; James 2017: 223–225), aniconic mosaics adorning the vault and lunettes of the Church of Mar Gabriel at Kartmin (512; Hawkins, Mundell, and Mango 1973), Cypriot

[10] Examples of wall paintings are similarly rare in the western part of the empire following the end of catacomb mural painting in the 4th century. Three such examples survive in Rome: the recently researched and restored wall paintings from Santa Maria Antiqua (Bordi 2016b), an 8th-century depiction of an Enthroned Virgin and Child in the lower Basilica of San Clemente, and the early 6th-century frescoes at San Martino ai Monti (Davis-Weyer and Emerick 1984). A number of wall mosaics from the Italian Peninsula, dating from approximately 400 to the 8th century, such as those in the baptistery of the Basilica of Santa Restituta in Naples (second half of the 4th century), Santa Pudenziana (approximately 400) and Santa Maria Maggiore in Rome (432–440), and San Vitale (approximately 540) in Ravenna, represent mural art from the period between Late Antiquity and the early Middle Ages (see, for example, Ihm 1992; Spieser 1998; James 2017).

wall mosaics in the Churches of Panayia Kanakaria at Lythrankomi (6th century; Megaw and Hawkins 1977), Panayia Angeloktistos at Kiti (6th century), Panayia tis Kyras at Livadhia (early 7th century), and the Episcopal Church in Kourion (late 6th century; Megaw 1976; Michaelides 1989).[11] Recently, Basema Hamarneh collected some evidence on wall mosaics from Jordanian churches (Hamarneh 2015).

Farther away, in Thessaloniki, wall mosaics survived in the Rotunda, also known as the Hosios Georgios Church (late 4th century?; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 50–127; James 2017: 174–179)[12] and in the katholikon of the Latomou Monastery (Church of Hosios David; late 5th century; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 183–195), while wall mosaics from the Church of St Demetrios in the same city are known thanks to early-20th-century watercolors (second half of the 5th and early 7th century; Cormack 1969; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 131–179). Non-figural Justinianic mosaics have survived in the Hagia Sophia (Teteriatnikov 2017).

The period of transition from a Graeco-Roman artistic legacy to Christian art ended with the age of Iconoclasm. Despite its ultimate defeat, the aniconic movement caused irreversible shifts in the iconography, aesthetics, and concepts of religious art, favoring some of the motifs at the cost of others. The last example of monumental wall decorations perceived as being closely related to the Late Antique tradition are the Umayyad wall paintings from the castle of Qusayr Amra (first half of the 8th century; Fowden 2004; Vibert-Guigue and Bisheh 2007) and the wall mosaics surviving in the Dome of the Rock in Jerusalem (684/5?–691/2?; Rosen-Ayalon 1989: 12–24, 46–62; James 2017: 257–260) and the Great Mosque of Damascus (706–714/715; Flood 2001; McKenzie 2013; James 2017: 260–262).

The archaeological evidence may be scarce, but several clues imply that wall paintings were common in Late Antique buildings and especially in churches. First, adorning interiors with wall paintings in Late Antiquity was a continuation of an artistic tradition of painting the interiors of temples, public buildings, residences, and common houses that existed in Graeco-Roman times and was continued throughout Late Antiquity. The continuity of this tradition is attested by the iconoclastic vs. orthodox disputes of the 8th and 9th centuries concerning the subject matter and the possible influence of artworks on the faithful without ever questioning the legitimacy of the art of wall painting in general.[13]

Wall painting was encouraged also by factors of a technical nature. Late Antique buildings were oftentimes constructed of crude and undressed fieldstone alongside well-dressed elements from dismantled Hellenistic- and Roman-period buildings. Such a variety of masonry materials required a significant amount of mortar to bind all the elements together, but it also made it an aesthetic necessity to cover up this patchy surface. Thickly laid plaster compensated for the irregularities of the masonry, sealed gaps between individual stone elements, and protected weak parts of the walls from damage. Additionally, its white or off-white color significantly brightened interiors, while providing an excellent substrate for colorful depictions.

[11] For a list of findspots of fragmentary wall mosaics or glass mosaic tesserae see James 2017: 466–471 and the *Database of Roman and Medieval Wall Mosaics* at http://www.sussex.ac.uk/byzantine/mosaic/

[12] The dates for the Rotunda wall mosaics range from the late 4th to the early 6th century. Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi (2012: 115–116) argue that the mosaics were made as early as during the reign of Constantine (306–337).

[13] See, for example, Brubaker and Haldon 2011; Elsner 2012; Strezova 2013.

Finally, numerous small fragments of painted plaster are found on almost every archaeological site in the region preserving Late Antique ecclesiastical complexes of any kind. Overshadowed by other finds, especially floor mosaics, these fragments usually pass unappreciated and unpublished. Collected and recorded with diligence, they could well illustrate the scope of monumental wall decoration within the sacred spaces.

1.2 Textual sources

Historical sources from the 4th to the 9th centuries testify to the commonness of wall paintings both in sacred spaces and in public and private secular interiors. Most of these, referring to art in general, and to wall decorations in particular, are collected in Cyril Mango's classic anthology (1986). Here, the focus is on texts referring to Syro-Palestine, Asia Minor, and Constantinople, while a few of the cited texts do not refer to a specific location. The texts fall under one of two categories: i) ekphrases – descriptions presenting, interpreting, and celebrating a building or a work of art for a contemporary listening or reading public; and ii) texts that express either an iconoclastic or an iconophile position in the discourse on the legitimacy of decorating Christian spaces (both the sacred and the secular) with religious art.

The information and details of artworks described in these sources are different as a result of the different function of these texts. Ekphrases may contain relatively detailed descriptions of wall decoration and may even specify materials employed for their execution (e.g., types of marbles used for wall revetment). They may also forgo on iconographic or technical details, focusing instead on the symbolic interpretation of architectural form and decoration of sacred spaces.[14] This unevenness of information provided in the ekphrases results from the fact that they were not meant to document a building or an artwork but to describe it in a poetic style, often as a rhetoric or literary exercise.

One example of such a textual source is a celebrated Syriac hymn about the Cathedral of Urfa/Edessa.[15] From the many metaphors in the text we learn that the lower parts of the cathedral walls were lined with marble, above which came glittery wall mosaics in gold and the colors of the rainbow. The iconographic program included representations of Christ, the apostles, prophets, saints, and confessors; however, no clue is given as to the iconographic formulas or the compositional arrangements of the depicted subjects (Polański 2008: 211).

The other category of texts was produced by both sides of the iconoclastic dispute. These sources generally provide little detail on the appearance of wall decorations nor do they show much regard for aesthetic considerations. Instead, they discuss the consequences (positive or negative depending on the party) of depicting certain subjects. In effect, these texts do not provide a complete picture of the decorations: they record potentially controversial or questionable subject matter, but ignore that which was considered "neutral" and did not spark controversies.

[14] For a discussion of literary challenges in composing Late Antique ekphrases of church buildings see Webb (1999); also see Arnulf's (2004) synthetic work on descriptions of architecture and artworks from antiquity to the early modern period.

[15] The hymn, preserved in the 13th-century Codex Vaticanus 95, fols 49–50, was written by an anonymous Syriac poet active during the reign of Justinian. Tomasz Polański argues for a date around 550 for its composition (Polański 2008: 201).

1.2.1 Wall decorations in churches and shrines

A text that speaks of the pictorial program of an interior of a church is the *Letter to Prefect Olympiodoros* by Nilus of Sinai (d. approximately 430; *Epistulae* IV, 61). In his missive, Nilus strongly advises Olympiodoros against depicting hunting and fishing scenes in the aisles of the church and "a thousand crosses and the pictures of different birds and beasts, reptiles and plants" in the nave (quoted after Mango 1986: 33). He argues that such trivialities would be distracting for the faithful. Instead, he instructs, a church should be decorated with one image of a cross on its east wall and stories from the Old and New Testaments in the aisles. Nilus' rejection of these subjects as inappropriate for a sacred interior intimates that they were indeed common in church decoration of the period. He likely used the literary formula of an epistle to express a general critique of decorative programs that he had had the opportunity to see in a church or churches.

A repertoire of nature-derived motifs similar to the ones rejected by Nilus as unapt for a church was also criticized by Asterius of Amaseia (approximately 350–410), who had seen it on luxurious, purple-dyed silken garments (*Homilia de divite et Lazaro*). Asterius' critique of garments is of interest in the present context as he observes that the "vain and curious" broidery on the garments imitates the quality of paintings and he states that people wearing them "appear like painted walls" (quoted after Mango 1986: 51). Among the embroidered subjects he lists various animals, landscapes, hunters, and a "whole repertory of painting that imitates nature". He also criticizes people wearing garments with embroidered depictions of events from the life of Christ, his miracles, and his disciples.

While Nilus encouraged depicting stories from the Testaments in a church and Asterius seemed to be upset more with the vanity of people wearing expensive garments with religious motifs than with the motifs themselves, Epiphanius of Salamis (approximately 315–403) was a fierce opponent of any images of holy persons.[16] He considered them idolatrous and rejected the idea that they helped people to remember the Old and New Testament events. We learn from his writings that images of the Apostles Peter, John, and Paul were executed on the plastered walls of churches (*Testamentum*) and that he had seen (and called for the removal of) images of Christ, prophets, and saints depicted on walls and curtains of churches, baptisteries, martyria, and houses (*Epistula*).

St Gregory of Nyssa (approximately 335–395) also confirmed the presence of religious figural subjects in churches and martyria but unlike Epiphanius he was in favor of religious images and emphasized their significance in the instruction of the faithful and in evoking pious emotions and spiritual experience (Noble 2009: 16). For example, he praises the painted story of the martyrdom of St Theodorus which decorated the saint's shrine at Euchaita (Pontus) (*Oratio de S. Theodoro*). He writes of images of the "martyr's brave deeds, his resistance, his torments, the ferocious faces of the tyrants, the insults" (quoted after Mango 1986: 37), the pyre on which Theodorus was burnt, his death, and a depiction of Christ in human form. Such complexity of the subject and the number of details suggest that the painted story of St Theodorus' martyrdom could have

[16] Epiphanius' writings that deal with images have been an important source for the decoration of early churches. However, their authenticity, as well as that of a few other 4th-century sources on the same subject, has been questioned. Specifically, it has been proposed that some of the passages referring to images were edited or even inserted later, during the iconoclastic controversy (Brubaker and Haldon 2011: 44–50; also see Polański 2011b: 204–206).

consisted of a number of separate scenes and plausibly occupied a considerable surface of the walls of his martyrium. In *Oratio de deitate*, St Gregory mentions often seeing “depicted in painting” the Old Testament scene of the Sacrifice of Isaac.

The panegyrics by Choricius of Gaza (first half of the 6th century), composed in honor of the Gazan Bishop Marcianus, are also free of doubts concerning the legitimacy of religious art and its subject matter. Instead, they contain enthusiastic praise of the architecture and wall decorations of the Churches of St Sergius and St Stephen in Gaza, giving in effect the most detailed account of the pictorial programs of pre-iconoclastic churches in the Levant.

Choricius begins his considerations of the wall decorations in the Church of St Sergius with a description of the wall mosaics and smoothly transitions to painted representations (*LM* I, 17–76).[17] Distinguishing between these two techniques does not seem of particular concern to him, because for most of his discourse he does not identify them. In truth, the technique in this case was immaterial and the same pictorial program could be executed in either one, the choice of artistic medium being a factor of the financial means of the donor or the community. Nevertheless, even without detailed technical information, Choricius’ account is invaluable for the study of wall decoration in Late Antique churches.

The main apse of the Church of St Sergius was decorated with a gold and silver mosaic depicting Mary with the newborn Christ to her bosom. Next to her stands St Sergius, accepting from Stephen, Governor of Palestine, a model of the church the latter had funded along with Bishop Marcianus. The aisles and their apses appear to have been embellished with serene depictions of nature which evoke in Choricius sensations of heavenly bliss: there were “ever-burgeoning trees”, a *kantharos* from which vines grow, and depictions of birds, particularly a flock of partridges. Other images of nature, specifically fruit-bearing pear, pomegranate and apple trees, and a flying eagle, were located on the arches of the church and directly under the roof.

A complex and elaborate pictorial program occupied the presumably vaulted ceiling. It narrated events from the life of Christ organized in the cycles of childhood, miracles, and the Passion.[18] Scenes included the Annunciation to the Virgin Mary (Lk. 1:26–38), Nativity (Lk. 2:1–20, Mt. 1:8–12), Annunciation to the Shepherds (Lk. 2:8–20), and Presentation at the Temple (Lk. 2:23–24). The Nativity cycle was followed by depictions of a number of miracles: Changing Water into Wine at Cana (Jn. 2:1–11), Healing the Mother of Peter’s Wife (Mt. 8:14–15, Mk. 1:29–31, Lk. 4:38–41), Healing a Man with a Withered Hand (Mt. 12:9–13, Mk. 3:1–6, Lk. 6:6–11), Healing the Centurion’s Servant (Mt. 8:5–13, Lk. 7:1–10), Raising of the Son of the Widow of Nain (Lk. 7:11–17), Anointing of the Feet (Lk. 7:36–50), Calming the Storm (Mt. 8:23–27, Mk. 4:35–41, Lk. 8:22–25), Walking on Water (Mk. 6:45–53, Mt. 14: 22–34, Jn. 6:15–21), Exorcism of the Gerasene Demoniac (Mk. 5:1–20, Lk. 8:26–39, Mt. 8:28–34), Healing of a Bleeding Woman (Mk. 5:25–34, Mt. 9:20–22, Lk. 8:43–48), and Raising of Lazarus (Jn. 11:1-44). Finally, the major events of the Passion and Resurrection of Christ were represented: Last Supper (Mt. 26:17–30, Mk. 14:12–26, Lk. 22:7–39, Jn. 13:1–17:26), Kiss of Judas (Mt. 26:47–50, Mk. 14:43–45), Christ before Pilate (Jn. 18:28–40, Mk. 15:1–15, Lk. 23:1–7, Mt. 27:11–54), Mocking of Christ and the Crucifixion (Lk. 23:26–43, Mt. 27:32–50, Mk. 15:21–47, Jn. 19:17–37), Tomb Guarded by Soldiers (Mt. 27:62–66), Christ’s Appearance to the Women

[17] The Church of St Sergius was completed before 536 (Mango 1986: 60, note 25).
[18] For a detailed discussion on the two former cycles see Polański 2010.

after Resurrection and Ascension to Heaven (Lk. 24:50–53). Depictions of prophets enclosed the central part of the roof.

Laudatio Marciani II contains a description of the Church of St Stephen, presumably dedicated between 536 and 548 (*LM* II, 28–54). It was a three-aisled basilica with women's galleries over the aisles and a square atrium. The wall of the eastern portico of the atrium was adorned with depictions of "all things the sea brings forth, and all the tribute of the earth" (quoted after Mango 1986: 69), probably meaning all kinds of marine and land creatures.[19] Choricius marvels over the multitude of the depicted beings as well as the realism, extreme beauty, and excellent execution of the images.

The east wall of the church bore depictions of St John the Baptist and St Stephen, presumably on the triumphal arch.[20] The semi-dome of the apse accommodated a depiction of Christ. The register between the architrave of the colonnades of the nave and the columns of the galleries was covered with marble revetment, while the walls above the galleries and below a series of arched windows featured depictions of animals. The walls of the aisles were decorated with Nilotic landscapes populated by various kinds of birds.[21]

Compared to Choricius' description, later texts are much less exhaustive regarding wall decorations. *Epistola synodica patriarcharum orientalium* (VII, 8), a letter presumably addressed to Emperor Theophilus by a council held in Jerusalem in 836, records a mosaic depicting the Nativity and the Three Magi adoring Mary with the newborn Christ on the western facade of the Basilica of the Nativity at Bethlehem. Even though the text attributes the execution of this decoration to Empress Helena, it is more likely that it was created at the time of the restoration of the church by Justinian (Mango 1986: 114).

Given the number of Justinian's (r. 527–565) foundations, the written references to monumental decorations of the buildings that he constructed or renovated are surprisingly rudimentary. Procopius in *On Buildings* focuses chiefly on architecture and building materials. He marvels over the interior decoration of the Hagia Sophia, the different colors and kinds of marble, and the ceilings covered with a gold mosaic (I, 1.54–60). Other texts concerning the construction of the Hagia Sophia celebrate the building but are rather vague with regard to the wall decorations. Paulus Silentiarius (active approximately 560) speaks of a cross with a small medallion with the face of Christ at the intersection of its members, depicted on the dome mosaic (*Descriptio S. Sophiae*, 489, 506). Fruit, baskets, leaves, vines, and birds were executed in *opus sectile* on the spandrels of the gallery colonnade (*Descriptio S. Sophiae*, 674).

A legendary text about the life of St Pancratius provides an interesting account not only of the pictorial program of a church allegedly built by St Peter in Pontus, but also of the way iconographic models were disseminated (*Vita S. Pancratii*). According to this account, St Peter commissioned a painter named Josephus to execute an image of Christ and a series of paintings depicting events from his life. When the work was complete, he ordered that all churches be decorated with

[19] Tomasz Polański (2011b: 185) has suggested that Choricius is actually describing a floor mosaic in the narthex.

[20] Mango 1986: 70, note 84. It should be kept in mind that Choricius' passage on the iconographic program of the sanctuary is ambiguous. For a discussion of possible interpretations of this passage see Polański 2011b: 190, 194–199. Polański proposes to see St John the Baptist instead of Bishop Marcianus and believes that all of the figures were depicted in the apse.

[21] See also Polański's (2009; 2011b: 201–204) discussion of this depiction and other representations of Nilotic landscapes in Syro-Palestinian churches.

these images. The models were executed on wooden panels in encaustic technique and on sheets of parchment compiled in volumes, and sent to bishops who were in the course of constructing and decorating churches. The main scenes of the pictorial program included the Annunciation, Nativity, Baptism, various miracles, Betrayal of Judas, Crucifixion, Deposition, and Resurrection and Ascension to Heaven. Furthermore, the author of the *Life of Pancratius* claims to have built a martyrium for the saint, which he decorated with the story of Genesis, depictions of events described in the New Testament, and a portrait of St Pancratius.

Texts referring to the period of Iconoclasm (726–842) generally do not provide much new information on the subject matter of religious wall paintings. What is interesting is that they testify to the continued coexistence of nature-derived motifs from the pagan repertory and Christian religious art, a phenomenon already observed in the accounts of Nilus and Choricius.[22] For example, a text by Stephen the Deacon, dated to 806, tells how images of Christ and Mary were smeared over or destroyed by iconoclasts, while images of trees, animals, and various genre scenes were not mutilated but preserved with care (*Vita S. Stephani*). The same text describes how images of events from Christ's life in the Church of the Blachernae in Constantinople were replaced with mosaics depicting birds and inhabited vine scrolls. The Continuator of Theophanes (*Theophanes Continuatus*) also records taking down holy images in churches and replacing them with depictions of animals.

One more kind of written record which may shed some light on the iconography of wall decorations in churches are inscriptions preserved on floor mosaics. For example, a mosaic inscription from the er-Rashidiya church (573/574) reads "Entering hither, thou will see the Virgin Mother of Christ, the ineffable Logos dispensation of God, and if thou believe, thou shall be saved," suggesting that an image of Mary was placed across from the entrance, most likely in the semi-dome of the apse (Hamarneh 2015; Leatherbury 2019: 243–244). A mosaic inscription in the Church of the Virgin at Madaba (767) similarly seems to allude to a depiction on the east wall: "If you want to look at Mary, virginal Mother of God, and to Christ whom she venerated, Universal King, only son of the only God, purify [your] mind, flesh and works. May you purify with [your] prayer the people of God" (Hamarneh 2015; Leatherbury 2019: 239–242).

1.2.2 Wall decorations in domestic and public spaces

The literary evidence on wall paintings in houses is even more rudimentary than in the case of the churches. The earliest testimonies of introducing Christian religious images in houses come from the mid-2nd century and speak explicitly of panel paintings (Mathews and Muller 2016: 131–134). In the 4th century, St John Chrysostom recorded a fashion for representing the Holy Bishop Meletius of Antioch (360–381) "on the walls of their rooms and in many other places" (*Homilia in Meletium*; quoted after Mango 1986: 40), although he does not specify whether these were panel or wall paintings, or both. Next, there is the aforementioned opposition of Epiphanius of Salamis to placing or painting images of Christ, apostles, prophets, and saints on walls or door curtains of both churches and private houses. He wished for the curtains to be removed and the paintings to be "whitewashed". This erasure technique—if we understand "whitewash" literally as

[22] For a discussion on the reasons behind favoring nature-related subjects by iconoclasts see Maguire 2012.

a water solution of lime used to whiten walls—is typically applied to wall plasters, which indicates that some of the images in houses criticized by Epiphanius were actually wall paintings.

The *Miracles of St Cosmas and St Damian*, written probably in the 6th or 7th century and described in the Acts of the Seventh Ecumenical Council (787; *Miracula SS. Cosmae et Damiani*), may also refer to wall paintings in a domestic setting. The text tells the story of a woman who depicted the two saint physicians upon the walls of her house and was later healed of disease after having ingested some plaster that she scraped from their image. The said plaster could have been either lime-based wall render that served as the substrate of a wall painting, or a thin ground layer—possibly made of gypsum—applied to a wooden board of a panel painting.

Two further texts speak of wall paintings in secular, public buildings. Procopius of Gaza delivers a detailed description of mural paintings in a public building in Gaza. The images represented two episodes from Euripides' *Hippolytus* (see also Talgam 2004). The other text is a poetic ekphrasis of a wall painting in the winter baths in Gaza (alternatively, in Antioch),[23] composed by John of Gaza (*Tabula Mundi*; also see Downey 1938; Cameron 1993; Talgam 2008; Polański 2011a). The painting, possibly executed in the 6th century, represented a *Tabula Mundi* (a picture of the world) in the form of over 50 personifications of terrestrial, oceanic, and celestial phenomena, as well as a golden cross depicted against a star-studded sky.

1.3 Recapitulation

The presented corpus of remains of wall paintings found on different archaeological sites, as well as mentions in historical written sources, indicate that wall paintings were much more common in both sacred and secular Late Antique buildings than hitherto assumed. This overview also serves to demonstrate that the wall paintings from Porphyreon are a rare and unique find. This assemblage, albeit incomplete and fragmentarily preserved, gathers together various iconographic subjects, isolated examples of which have hitherto been reported from sites scattered across the Levant and beyond. In addition, some of the depictions from Porphyreon are the first material counterparts of some of the motifs mentioned in historical texts.

[23] The confusion is produced by *lemmata* on the margins of the only extant manuscript of the poem (Palat. gr. 23/ Paris. gr. suppl. 384; see Cameron 1993).

Chapter 2

PORPHYREON:
THE SITE AND THE DISCOVERY OF THE WALL PAINTINGS

2.1 Geographical and administrative setting

The site of Jiyeh/Porphyreon is located on the southern Lebanese coast, about 30 km (20 Roman miles) south of Beirut/Berytus, at the foot of the Lebanon Mountains, where they gently descend to the sea [*Fig. 2-1*]. A belt of agricultural lowland about 2 km wide follows the coastline from the southern border of Beirut down to the Ras an-Nakura cape, creating a natural and convenient communication route slotted between the sea and the mountain range.

The location of Porphyreon takes advantage of a landform surrounding a small bay, which is sheltered from the south by a high, rocky cape, Ras Nabi Younes. The ancient road ran through a narrow passage which made it easy to control and to defend. The closest rivers are Nahr Damour, the estuary of which is located about 6 km north of the site, and Nahr Awwali, which flows into the sea about 9 km to the south. The shallow bay provided good conditions for the installation of a harbor, but neither historical accounts nor an underwater archaeological survey have yielded any relevant evidence to date (Waliszewski et al. 2008: 21–23; Wicenciak 2016: 15). Stratigraphic surveys revealed that the sea level in antiquity was higher and so the settlement, the remains of which are currently about 30 m inland, must have been situated very close to the water (Waliszewski and Wicenciak 2007: 429).

The modern archaeological site is located among active dunes (Sanlaville 1977: *Carte* 8), which explains why after each excavation campaign the uncovered structures were relatively quickly reburied in sand. The vegetation is limited to shrubs and weeds. The ancient settlement drew water from small nearby streams and a number of wells. At the beginning of the 20th century, an early explorer of the site, Georges Contenau, recorded a freshwater spring (Contenau 1920: 295).

The accounts of the earliest researchers differentiated between two sites located within the premises of the modern town of Jiyeh. The site of Nabi Younes occupied the southern part of the bay and was first excavated by Ernest Renan (Renan 1864; see *§ 2.2*). Muslims traditionally associated this place with the Prophet Jonah (hence the name "Nabi Younes"), believing that he had come ashore on a local beach after a whale spat him out. He is also believed to be buried in this area. Both events were commemorated with a small mosque built probably in the 11th century (Wicenciak 2016: 19). In the early 20th century, Contenau excavated an early Christian basilica in the village of Jiyeh, which he considered separate from Nabi Younes (Contenau 1920). Nevertheless, in antiquity these two locations most likely constituted one settlement.

Two sites on the Eastern Mediterranean coast have the toponym of Porphyreon; the other one is located in the area of present-day Haifa (Tsafrir, Di Segni, and Green 1994: 204; Zigelman 2001; Waliszewski et al. 2008: 7). However, the four historical sources speaking of Porphyreon and its surroundings appear to refer to the location between Beirut/Berytus and Sidon, that is, our Porphyreon. These sources date from the 7th century BCE to the 4th century CE and

include a Neo-Assyrian inscription of Asarhaddon (Borger 1956: 48, Episode 5, col. III, 1–7), Pseudo-Skylax's *Periplus* (104; mid-3rd century BCE), *The Histories* by Polybius (V, 68.6, 69.1; approximately 218 BCE), and *Itinerarium Burdigalense* by the Pilgrim of Bordeaux (333 CE). The toponyms that appear in these texts have been discussed exhaustively and juxtaposed with archaeological finds by Urszula Wicenciak in her study on Hellenistic and Roman pottery



Fig. 2-1. The eastern coast of the Mediterranean with the location of Porphyreon on the ancient Via Maris road

production in Porphyreon (Wicenciak 2016: 15–21). An examination of historical sources, as well as dates appearing in mosaic inscriptions from Porphyreon, transcribed according to the Sidonian calendar, indicate that it remained within the territory of Sidon throughout antiquity (Abou Diwan 2014; Wicenciak 2016: 22).

The economic base of the ancient town of Porphyreon is disputable. The name hints at the production of the famous Phoenician purple dye, but the archaeological evidence has yet to confirm this activity. The size of the site, which has been investigated only to a small extent in modern times, indicates a settlement of substance; however, the laconic references to the town of Porphyreon in historical sources suggest that it was not a town of particular importance. For example, Porphyreon makes its way into Polybius' account chiefly because of the strategic advantages of the surrounding landform, not because of anything of particular significance in the town itself (*The Histories*, V, 69.1). The tall and steep cape of Nabi Younes, towering above a bottleneck passage along the sea, made it an excellent observation point and an advantageous strategic position. These features were considered by Ptolemy IV and Nicolaos, his *strategos*, in preparation for a battle with the Seleucid armies of Antiochos III in 218 BC (Waliszewski et al. 2008: 9–12). The town must have been witness to the battle, which presumably took place south of it.

Just as crucial was the settlement's location on the Via Maris, a major communication route in the Levant (Alt 1954) [see *Fig. 2-1*]. The Pilgrim of Bordeaux referred to Porphyreon as a *mutatio*, Latin for "change", which suggests a place where travelers could rest and replenish supplies (perhaps change horses as well). It retained this character through the 18th and 19th centuries when travelers to Palestine recorded Nabi Younes in their diaries (Wicenciak 2016: 19).

People passed through Porphyreon for centuries, but it appears that the town itself was more a witness than a participant of the events of the day. The heyday of Porphyreon could well have been in the late 5th and 6th centuries CE, when a large basilica was constructed there. From that time also comes an elegant mosaic with a Nilotic scene discovered during construction works in the area between the residential district and the necropolis (Ortali-Tarazi and Waliszewski 2000). Procopius of Caesarea lists a "Porphyreon" among the locations where Justinian financed the construction or renovation of churches and pilgrims' facilities (*On Buildings*, V, 9–23). The "House of the Virgin" in Phoenician Porphyreon appears in Procopius' register between the "poor-house at Bostra" and the "Monastery of St Phocas on the Mount". Since the former site is far from the coast and the location of the latter is unknown, this sequence of sites does not indicate whether the author meant our Porphyreon or the southern one, near Haifa. Both were located in the province of Phoenicia.

Porphyreon is mentioned twice in John Moschos' *Spiritual Meadow*, a collection of monastic stories (Tales 124, 131). Abba Zosimos the Cilician is said to have spent two years in (the area of?) Porphyreon as an anchorite; perhaps that is why no details of the town itself are given in the text. The other story mentions Procopius, a lawyer from Porphyreon who, out of concern for the well-being of his children in the face of a deadly plague in Caesarea, went to Abba Zachaios of the Church of Holy Sion to appeal for help and intercession. If we assume that this plague affected Caesarea Maritima, it seems more probable that Procopius was from the "other" Porphyreon, located in the area of modern Haifa, because those two towns are only about 30 km apart and thus the spread of the plague was a plausible risk.

Contrasting with this rudimentary and vague historical information is a large and once-richly decorated basilica at Porphyreon. Its scale, including the interior decoration, demonstrates a substantial financial effort on the part of the local community aimed at building and adorning it. Perhaps, despite the silence of the sources, it was an important religious site and pilgrim destination or, at least, a major stop on the route to the Holy Land.

The site was abandoned at some point in the 7th century (see below, *§ 6.4*). It lay undisturbed under the dunes until the second half of the 19th century, when its remains accidentally drew the attention of a French scholar.

2.2 History of excavations and discovery of the wall paintings

The architectural remains of Porphyreon were brought to light during five different campaigns that took place between the second half of the 19th and the beginning of the 21st century. A large early Christian basilica and a partly unearthed residential district stand at the core of the excavated zone [*Fig. 2-2*]. The most recent archaeological research also covered a pottery production zone (Domżalski et al. 2005; Wicenciak 2014; 2016) and a necropolis (Gwiazda 2014; Jakubiak 2014–2015).

The first spade was sunk into the ground in Porphyreon in 1863 when Ernest Renan, a French orientalist and scholar entrusted with an archaeological mission to Lebanon, surveyed the hinterland of Sidon. While wandering the dunes of the coastal site of Nabi Younes, he noticed a large sandy mound which, he assumed, concealed an ancient structure. In order to confirm this supposition and to evaluate the character of the structure, he decided to "open one of the dunes" and pull out some of the construction elements (Renan 1864: 509–510). Instead, he reported finding rooms with walls decorated with painted images "présentant des animaux, des paons affrontés, des autruches, sous des petits arceaux peints très-ornés, rappellant la disposition des canons qu'on trouve en tête des beaux évangéliaires byzantins" (Renan 1864: 510). He also found, "lying around", numerous plastered stones with linear designs and a fragment of a red-painted Greek inscription: *NIKAC*.

A few weeks later, on 16 March 1863, Renan, who had apparently moved elsewhere with his surveys, received a note from his associate, Charles Gaillardot, about a floor mosaic the latter had unearthed in Nabi Younes (Renan 1864: 511–513). The mosaic was located in a rectangular room with an apse flanked by two niches. The lack of pillars and choir led Gaillardot to assume that he had discovered a small church or a chapel. The mosaic measured 7.41 m by 4.60 m and represented a rectangular carpet of small red flowers depicted against a white background and framed by a guilloche. A medallion located at the center of the carpet contained a representation of a vase, a partridge, peacocks, and an unidentified canine (a fox, dog, or wolf). A smaller medallion located in the apse contained ten lines of inscription. The inscription stated that the chapel was built under the blessed *abba* Sabatios and Petros, and the mosaic was laid under Khabber, the beloved of God. The dates in the inscription were a source of certain difficulties of interpretation, yet it was eventually determined that they used the Sidonian calendar and thus referred to 555 or 585 (Abou Diwan 2014). The titles used in the inscription gave Gaillardot the idea that the chapel could be associated with a monastery (Renan 1864: 514).

In the brief account cited by Renan, Gaillardot does not specify the height of the chapel walls. However, he describes two niches flanking the apse, which suggests that at least the east wall of the chapel was preserved to a considerable height. The fact that neither of the explorers referred





Fig. 2-2. The site of Porphyreon: top, topography of the excavated part with the early Christian basilica and residential district to the west of it (2004); bottom, aerial view of the site (2009)

to the wall paintings may lead to the conclusion that either the chapel was not decorated in this way or that this decoration was too poorly preserved to be mentioned. Another explanation is possible. Renan's "painted rooms" ("chambres" according to Renan, which does not necessarily mean houses) and Gaillardot's chapel have been regarded hitherto as two unrelated discoveries (e.g., Wicenciak 2016: 23–24). However, it seems unlikely that Gaillardot discovered the chapel by chance and it may well be that having surveyed the site and found antique remains, Renan entrusted his associate with further explorations, in effect of which the chapel was discovered. If so, at least some of the paintings initially reported by Renan could have decorated the said chapel. It would also explain why these paintings were not mentioned again once Gaillardot completed his exploration of the chapel, reaching the level of the mosaic pavement. Furthermore, the description of the wall paintings as resembling illuminations from "Byzantine codices" appears plausible in reference to chapel decoration, because preserved examples of Late Antique religious wall paintings share many iconographic and stylistic features with illuminated manuscripts from the same period (see below, *§ 5*). Naturally, Renan's "painted rooms" could have been in proximity to the chapel and thus were in fact located in the residential district (Saidah's 1975 excavations revealed wall paintings in the upper-floor rooms of buildings explored in the residential district). Whichever the case, during his initial survey Renan most likely unearthed only the topmost parts of the walls and had no way to determine the function of the structures without further exploration. The fate of these paintings is not known.

Half a century later, in 1914, another French explorer, Georges Contenau, undertook excavations in Jiyeh and discovered vast surfaces of floor mosaics located in the aisles of a basilical structure. Contenau began the exploration from the western end of the building, closer to the seashore, where the sand deposits were thin and guaranteed quick results. His account reveals that initially he was unaware of the character of the building, because the poorly preserved walls in its western part were by no means indicative of its function (Contenau 1920: 295–296). The discovery of a mosaic inscription referring to a baptistery revealed the sacred function of the building. Judging by the plan included in his report, Contenau unearthed approximately half of the length of the aisles and about two-thirds of the nave (Contenau 1920: 296, Fig. 91) [*Fig. 2-3*]. The work was halted for whatever reason, but Contenau admitted in his report that "it would be interesting" to complete the exploration of the eastern part of the basilica.

Contenau's account is focused on the architectural remains and mosaic pavements without mentioning any mural decoration. This could be because the poorly preserved walls in the western half of the building, where his work was concentrated, may have lost all the plaster coat.

A few decades later, on a spring day in 1975, a bulldozer excavating sand on the beach near the village of Jiyeh pulled out of the dunes dressed stones with remains of painted plaster. The Lebanese Directorate General of Antiquities (DGA) halted sand exploitation in the area and deployed an archaeologist, Roger Saidah, to excavate the site. From mid-July to mid-September 1975, which is how long the work lasted, Saidah unearthed a significant part (about 1000 m^2) of the residential district of a Late Antique village [*Fig. 2-4*; see also *Figs 2-14*, *2-15*, *2-16*]. In a short article published in 1977 he reported finding over 150 fragments of wall paintings, preserved both *in situ* and on the faces of ashlars from the collapsed walls (Saidah 1977). The religious subject matter of the paintings—representations of saints, crosses, painted religious inscriptions, and a fragmentary depiction of a fish that he interpreted as the whale swallowing or spitting out Jonas—inspired him

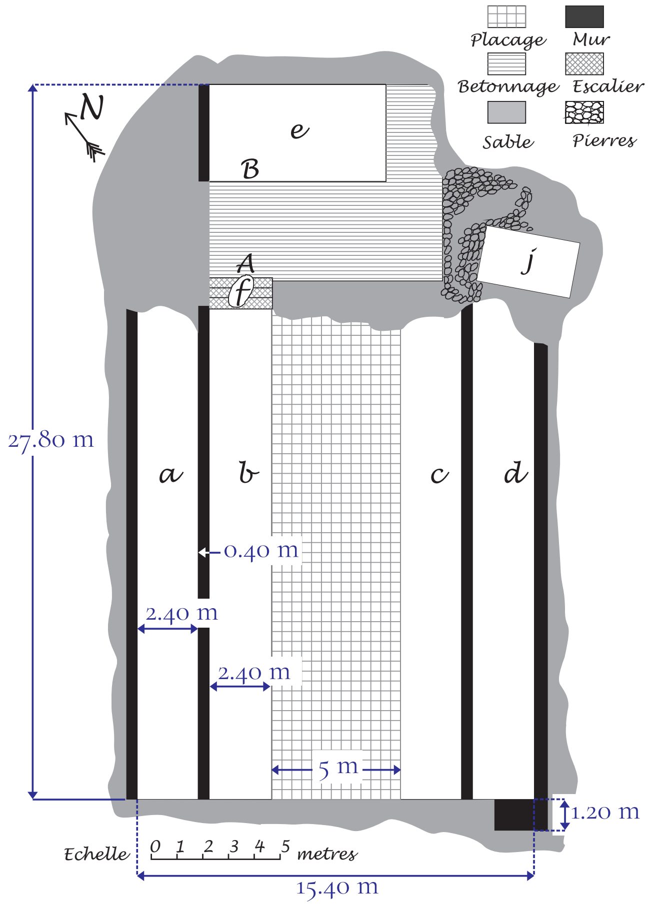


Fig. 2-3. Plan of a basilica partly unearthed by Georges Contenau in 1914; recorded four mosaic carpets in the aisles (white fields a–d in the drawing) and imprints of stone (marble?) slabs in the nave (checkered central stretch)

to propose that Porphyreon was an organized Christian religious community of some sort, possibly a monastery. Interestingly, Saidah did not mention any church in the proximity of the site, although, having doubtlessly studied the accounts of Renan and Contenau, he must have been aware of the existence of a large church building that the latter had explored somewhere in Jiyeh.

The outbreak of the Lebanese Civil War the very same year interrupted the work. Saidah's death four years later and severe damages to the archives and storage facilities of the Directorate General of Antiquities and the National Museum in Beirut resulted in the loss of a major part of the archaeological documentation as well as numerous finds from his excavations. It is not known what happened to the wall paintings described by Saidah, but some of the representations are documented on a set of recently recovered color slides.[1] They include views of the site and particular rooms, as well as images of individual ashlars with surviving painted plaster. The slides, alongside photographs illustrating Saidah's article in *Archéologia* (1977) and illustrations in an article on inscriptions written by Jean-Paul Rey-Coquais (1982), present 59 fragments of paintings—about a third of the 150 fragments reported by Saidah—preserved on loose ashlars as well as on the walls of the rooms. Another 20 fragments were rediscovered during successive excavation campaigns (see below, *§ 4.3*).

[1] PCMA-DGA archaeological mission director Tomasz Waliszewski was handed the slides by Claude Doumet-Serhal. For an examination of Saidah's work based on the slides see Gwiazda and Waliszewski 2019.



Fig. 2-4. Residential district during the 1975 excavations conducted by Roger Saidah; view southwest looking from room 72 (in the bottom right corner, partly visible room 45; see *Fig. 2-14*)



Fig. 2-5. Excavations in Basilica Q in 2005, looking southeast; note the well-preserved east wall of the basilica and the practically missing lateral and west walls

The next excavation campaign took place 12 years later, in 1987, prompted by an accidental discovery of floor mosaics, again by bulldozers scooping sand from the dunes. Excavations organized by the then Minister of Public Works, Transport, and Tourism Walid Joumblatt, led to the discovery of a basilica decorated with floor mosaics. It is generally accepted that this is the same building as the basilica partly explored by Contenau in 1914 (see below, *§ 2.4.2*). Both the excavation and subsequent conservation treatment of the mosaics were carried out by George Nahas, a Syrian restorer hired by Joumblatt, and his team (Beiteddine Museum Director Munir Atallah, personal communication). As the large surfaces of colorful mosaic pavements came to light, it became evident that they should be removed from the site and secured in another location. The site and the entire coastal zone were in constant danger of destruction due to frequent bombing raids on a nearby power plant. Furthermore, the site had already been damaged by clandestine digging for construction materials ever since the outbreak of the Civil War. The mosaics were lifted and moved to the Beiteddine Museum, where they underwent conservation treatment and are on display to this day (Jounblat, Seeden, and Atallah 1989; Wattel de Croizant 1999; Hélou 2019: 84–95).

The mosaics discovered by Nahas and his team were accompanied by at least 153 masonry elements (mainly ashlars) with patches of painted plaster fixed to their face.[2] Even though there is no photographic or written record of the findspots of particular painted fragments, it seems very likely that they were found in the much better-preserved eastern part of the building [*Fig. 2-5*]. These wall paintings were secured and moved to the Beiteddine Museum along with the mosaics. Probably around that time the paintings underwent conservation treatment for the first time (see below, *§ 4.1*). For almost 20 years, until 2008, they were stored in the vaults of the Beiteddine Museum, after which they were moved to a proper storage room.

In 1997, excavations in Jiyeh were undertaken by a Polish archaeological expedition directed by Tomasz Waliszewski from the Polish Centre of Mediterranean Archaeology (PCMA) of the University of Warsaw, working in cooperation with the Lebanese Directorate General of Antiquities (DGA). The area of the residential district previously explored by Saidah was cleared and surveyed in the first season in the field. However, issues with site protection forced the work to be suspended until 2003 (Waliszewski 2005: 420).

During the 2004 and 2005 campaigns, the PCMA-DGA team concentrated on clearing the basilica, which they designated as Basilica Q. Debris which had accumulated since 1987 was removed, the outer walls and interior divisions of the building were traced and measured, and the bedding of the previously removed mosaic pavements was studied (Waliszewski et al. 2008) [see *Fig. 2-5*]. Remains of wall paintings surviving *in situ* were documented. They included a depiction of a cross inside a medallion in the upper-left part of the basilica's east wall (*Cat. 44*), and fragments of a yellow-pink-red wavy ribbon (*Cat. 76*) preserved in the northeastern corner of the presumed chapel abutting the south aisle (Waliszewski and Wicenciak 2007: 424, 428).

After two years of another forced pause in excavations, the PCMA-DGA archaeological team returned to the site to continue a full-fledged exploration and documentation of the residential district. Due to external factors, including the issue of safeguarding the site, the works had to be contained more or less within the area previously excavated by Saidah. In 2008–2010, the clearing

[2] This number of stones and ashlars made their way to Beiteddine, but there could have been more fragments that were left behind because, conceivably, their condition was not as good.

of about 80 rooms and units yielded approximately 70 blocks still bearing painted plaster (Waliszewski, Juchniewicz, and Gwiazda 2012: 425). Since they were discovered in rooms explored in 1975, their finding locations have to be considered as secondary. For example, several blocks with remains of paintings were found arranged in a row in one of the backfilled streets. The excavation campaigns of 2012–2014 were focused on establishing the stratigraphy of the site and reconstructing its history through a number of trenches and trial pits (Waliszewski et al. 2015; Wicenciak 2016: 39; Gwiazda and Waliszewski 2016: 45). The trenches yielded pottery finds that proved the site's continuous occupation from the Late Bronze Age (about the 14th century BCE) through the Late Antique period (7th century CE). A painting of a cross preserved *in situ* (*Cat. 1*) and another 32 blocks with painted plaster, also presumably from Saidah's secondary fill, were found at that time.

Initially, all of the ashlars and stones with painted plaster from the PCMA-DGA excavations were placed in a small on-site storage facility in Jiyeh. As their number grew and the condition worsened due to poor storage conditions, it became evident that a proper environment for their preservation should be provided. In 2012, 41 fragments with the most interesting iconography were transported to Beiteddine and placed with the fragments found in 1987. The remaining 61 fragments were left in on-site storage until 2016 when transport to Beiteddine was arranged. In consequence, all of the fragments of wall paintings preserved on ashlars and stones that were discovered between 1987 and 2014 are now stored in Beiteddine [*Fig. 2-6*]. A few crates of small fragments of painted plaster collected from the debris during cleaning of the site are kept in the DGA storage facility at the site of Chhim.



Fig. 2-6. Blocks with wall paintings from Porphyreon in the storage facility of the Beiteddine Museum

2.3 Past misfortunes, present challenges: study and presentation of the wall paintings

The complex story of excavations in Porphyreon spans more than 150 years and reflects the turbulent events of modern Lebanese history. The wall paintings presented in this study come from the three most recent campaigns, carried out in 1975, 1987, and the 2000s [*Table 2-1*]. It is a pity that there was no continuity between particular phases of research, and that different methodologies were used; moreover, the documentation from the first two campaigns is missing. This has created a number of challenges for the study and presentation of the wall paintings.

First, there is the issue of the provenance and original context of the paintings. Only five fragments have survived *in situ* in the residential district and basilica (*Cat. 1*, *44*, *76*, *187*, *188*) [see *Fig. 2-14*]. Those discovered *in situ* in the residential district by Saidah are known only from slides. The original location of the paintings was identified by comparing the photographed rooms with plans made during the most recent campaign. Wall paintings found *in situ* in Basilica Q have since deteriorated almost completely under the influence of harsh sea winds and insolation, but they can be studied from photographs and tracings made by the PCMA-DGA team.

Most of the wall paintings were preserved as patches of painted plaster adhering to ashlars and stones from the collapsed walls of the buildings. Those coming from the excavations conducted in 1975 and 1987 lack documentation of the findspots. While it may be generally assumed that most of the fragments discovered during the 1987 salvage works are from the basilica, the present study shows that there were among them a few specimens from Saidah's excavations in the residential district (e.g., *Cat. 169a*; see below, *§ 4.3*). Consequently, the contexts of the paintings should be treated with caution: in the broader sense, we cannot ever be sure whether

Table 2-1. Chronology of excavations and discovery of the wall paintings from Porphyreon

Date	Excavator	Excavated area	Wall paintings
1863	Ernest Renan, Charles Gaillardot	Chapel and/or houses in Nabi Younes; exact location unknown	Depictions of animals on the walls, single blocks with red linear compositions (no photographs or tracing)
1914	Georges Contenau	Basilica with mosaics; exact location unknown	No mention of wall paintings
1975	Roger Saidah/DGA	Residential district (Sector D)	About 150 fragments of wall paintings; 57 ashlars with painted plaster and two paintings *in situ* documented on color slides
1987	George Nahas on behalf of Walid Joumblatt	Basilica Q	About 150 stone elements with remains of painted plaster discovered in the eastern half of the basilica
2004–2005	Tomasz Waliszewski/ PCMA–DGA	Basilica Q (clearing)	Remains of wall paintings *in situ*
2008–2014	Tomasz Waliszewski/ PCMA–DGA	Residential district (Sectors D, E)	Remains of wall paintings *in situ*; 102 stone elements with remains of painted plaster; small fragments in debris from secondary fill

a block with painted plaster was found in the basilica or in the residential district, and in the narrow sense, we cannot ascertain neither the exact nor even the approximate location of particular fragments within the buildings in which they were said to be found. Moreover, the paintings on ashlars and stones unearthed by the PCMA-DGA team in the residential district turned out to be buried in secondary fill following the excavations in 1975, so their exact locations within the houses are unknown as well (Tomasz Waliszewski and Mariusz Gwiazda, personal communication).[3]

It was hoped at the beginning of this study that archaeometric analyses of the substrate layers of the paintings would show some distinctive technical features that would help to distinguish between the basilica and the residential district. The consistency in the execution of the paintings proved an interesting finding in its own right (see below, *§ 3.4*, *3.5*).

Next, there are the different "forms" of the study material. Saidah reported finding about 150 fragments of wall paintings in the residential district. They are missing except for a few fragments that "resurfaced" during the works in 1987 and the 2000s (which gives hope that the rest of the material is still reburied at the site). However, the 59 fragments known from the archival color slides collection from 1975, an article by Saidah (1977), and an article on painted inscriptions by Rey-Coquais (1982: 399–402) are included in the iconographic and stylistic part of this study. Obviously, working with these images was problematic for several reasons. No scale was used in these photographs and many of the pictures are very narrowly framed or askew. Moreover, paint handling, which is an important element of a stylistic analysis, is difficult to examine on flat images. The fragments preserved *in situ* were also studied from photographs and tracings.

While the most common form of preservation of the paintings from Porphyreon consists of patches of painted plaster fixed to the faces of masonry elements, the numerous fragments of plaster detached from their support should also be mentioned here. Such loose fragments were collected when the ashlars and stones found in the basilica were transferred from the vaults of the Beiteddine Museum to a proper storage facility—clear evidence of the deterioration they were subject to in the vaults. In most of the cases, it was possible to reassemble the detached fragments with the depictions they belonged to (e.g., *Cat. 45b*; see *Fig. 4-26*). Large quantities of such detached fragments were also found by the PCMA-DGA expedition in the debris in the residential district, but reassembling them proved virtually futile because they came for the most part from Saidah's backfill. A preliminary examination was made of these fragments and they were documented before being deposited in the DGA storage facility at Chhim.

Finally, the third significant challenge for any study of the wall paintings from Porphyreon is their state of preservation. The mortars and plasters constituting the substrate of the paintings are highly prone to disintegration. Inevitably, gradual loss of the substrate results in an irreversible loss of the image.

The condition survey carried out at the beginning of the present study indicated that most of the damage to the paintings had occurred after their discovery, chiefly due to unfavorable storage

[3] This was further confirmed by the presence of a synthetic varnish on some of the paintings unearthed by the PCMA-DGA expedition (see below, *§ 4.3*).

conditions (see below, *§ 4-2*). The paintings discovered in 1987 were stored for almost 30 years in the vaults of the Beiteddine Museum. Some of them lost the painted plaster completely, while the painting on others became illegible due to broad abrasions and numerous losses of the paint layers. Deteriorated fragments were excluded from the study for lack of any photographic documentation from the time of their discovery. The assemblage from the most recent PCMA-DGA excavation spent some years stacked in an on-site storage facility before being moved to Beiteddine; in some cases this has led to significant deterioration of the plaster layer. Some of these fragments can be interpreted now only thanks to photographs taken soon after their discovery (e.g., *Cat. 31bc*) [see *Fig. 4-11*].

About half of the fragments discovered in 1987 underwent conservation treatment soon after their discovery (see below, *§ 4.1*). However, these treatments turned out to be both a blessing and a curse for the present study. Some of the ashlars had had their backs trimmed with an angle grinder, thus losing their original shape and dimensions; this limited the possibility of retracing their original architectural setting. Furthermore, the painted surfaces were varnished in some cases (see below, *§ 4.3*). The varnish fulfilled its protective role, because the fragments that were coated have survived in much better condition than those that were not varnished. Unfortunately, a commercial synthetic resin was used for this purpose. It has yellowed and darkened over the course of time, significantly altering the appearance of the paintings and hampering the stylistic study. The varnish also proved extremely difficult to remove.

All of the fragments covered by the study are presented in the form of a catalog. In view of the ambiguities surrounding the original architectural context and the time of discovery of some of them, their fragmentary condition, their setting (*in situ* or on ashlars), and the different forms of the study material (i.e., archival photographs, tracings, fragments that survived "in the flesh"), the catalog has been arranged according to the subject matter of the representations. Nevertheless, each catalog entry contains information on the place and time of discovery. Within each of the iconographic groups the individual fragments are sorted from the better-preserved ones to those that are hardly legible.

For clarity of presentation and to facilitate navigation in this book, all fragments have been assigned unified catalog numbers, although the catalog also contains old inventory numbers (for this see the Concordance Table at the end of the volume). The wall paintings discovered in 1987 were inventoried around 2008 when they were moved from the vaults of the Beiteddine Museum to a proper storage facility by DGA employees Rana El-Eindari and Youssef El-Eid (personal communication). The fragments were assigned five-digit inventory numbers, for instance 97113. Thanks to these numbers it was ascertained that some of the ashlars and stones with remains of paintings had been broken while in storage between 1987 and 2008, because matching fragments with fresh-looking breaks (which were identified in this study), had been assigned individual inventory numbers (see below, *§ 4.2.3*, *4.6.6*). This resulted in some of the previously assigned numbers having to be combined, for example, 98540 and 98571 (*Cat. 219*).

Paintings from the PCMA-DGA excavations were initially registered in *Jy <number> WP* format, as in Jy 40 WP, which in 2012 was changed to *Jy <number> WP < last two digits of the year>*, e.g., Jy 2 WP 12.

2.4 Architecture, decoration, and chronology of the buildings

2.4.1 Basilica Q: architecture and chronology

The early Christian basilica (designated as Sector Q) is located about 30 m east of the present-day seashore. A stratigraphic trench opened on the beach about 200 m north of the site revealed that the sea must have been much higher in antiquity, which means that the entrance to the church was very close to the water (Waliszewski and Wicenciak 2007: 429).

Basilica Q is a sizeable structure, with exterior measurements of 41.5 m by 20.6 m. It is the second-largest Late Antique church discovered thus far in the province of Phoenicia Maritima—the Basilica of Quarter Sand in Tyre is slightly larger (Garreau-Forrest and Badawi 2014)—and the only one found between Sidon and Khaldé [*Fig. 2-7*]. Its foundation is conventionally associated with the date of 477 that appears on a mosaic discovered by Nahas at the entrance to the basilica [see below, *Figs 2-13*, *6-13*]. Nada Hélou, however, suggests that the building could have been constructed as early as the first half of the 4th century, because its plan resembles the plans of the basilicas founded by Constantine the Great (Hélou 2019: 90–91).

The east wall of the basilica is very well preserved; in some places it reaches a height of about 5 m [*Fig. 2-8*]. The nave ends in an apse, the aisles have straight end walls. The apse appears disproportionately small compared to the overall dimensions of the building. It is covered by a partly preserved semi-dome, with a keystone featuring a representation of a cross carved in high-relief. A synthronon, that is, a semi-circular bench for the clergy, was constructed in the apse at some point.

The presbytery was separated from the aisles by walls, remains of which still adjoin the basilica's east wall, but are not interbonded with it. This fact suggests that they might have been added at a later stage [*Fig. 2-9*]. A threshold was discovered between the presbytery and the southern aisle. Remains of a transversal partition that separated the presbytery from the rest of the nave were also found (Waliszewski and Wicenciak 2007: 424).

The walls in the western part of the building were meagerly preserved [see above, *Fig. 2-5*]. Only meticulous cleaning of the debris that had accumulated in the basilica over the years and a number of trial pits dug in the 2004 and 2005 seasons allowed the layout of the building westward of the presbytery to be traced, locating the west wall (Waliszewski et al. 2008). It was also established that the entrance led through a narthex.

The clearing revealed evidence of internal divisions of the southern and northern aisles. A few elements of a stone threshold dividing the northern aisle transversally (a chancel screen?) were found *in situ* about 9 m from the east wall (Waliszewski and Wicenciak 2007: 428). The southern aisle seems to have been partitioned by an apse-like structure located about 12.30 m from the east wall. Some remains of this construction could be traced on the floor level. This structure could have belonged to an earlier building (Waliszewski et al. 2008: 32). Even so, it seems to have been incorporated into the structure of the basilica and used to close off the eastern part of the southern aisle. The passage between the presbytery and the southern aisle, marked by the surviving threshold, as well as the presence of two large niches in the east wall of the southern aisle, both with evidence of shelves and a door, suggests that this delimited space could have served as a pastophorion. Additionally, a geophysical survey of the basilica revealed a series of underground anomalies

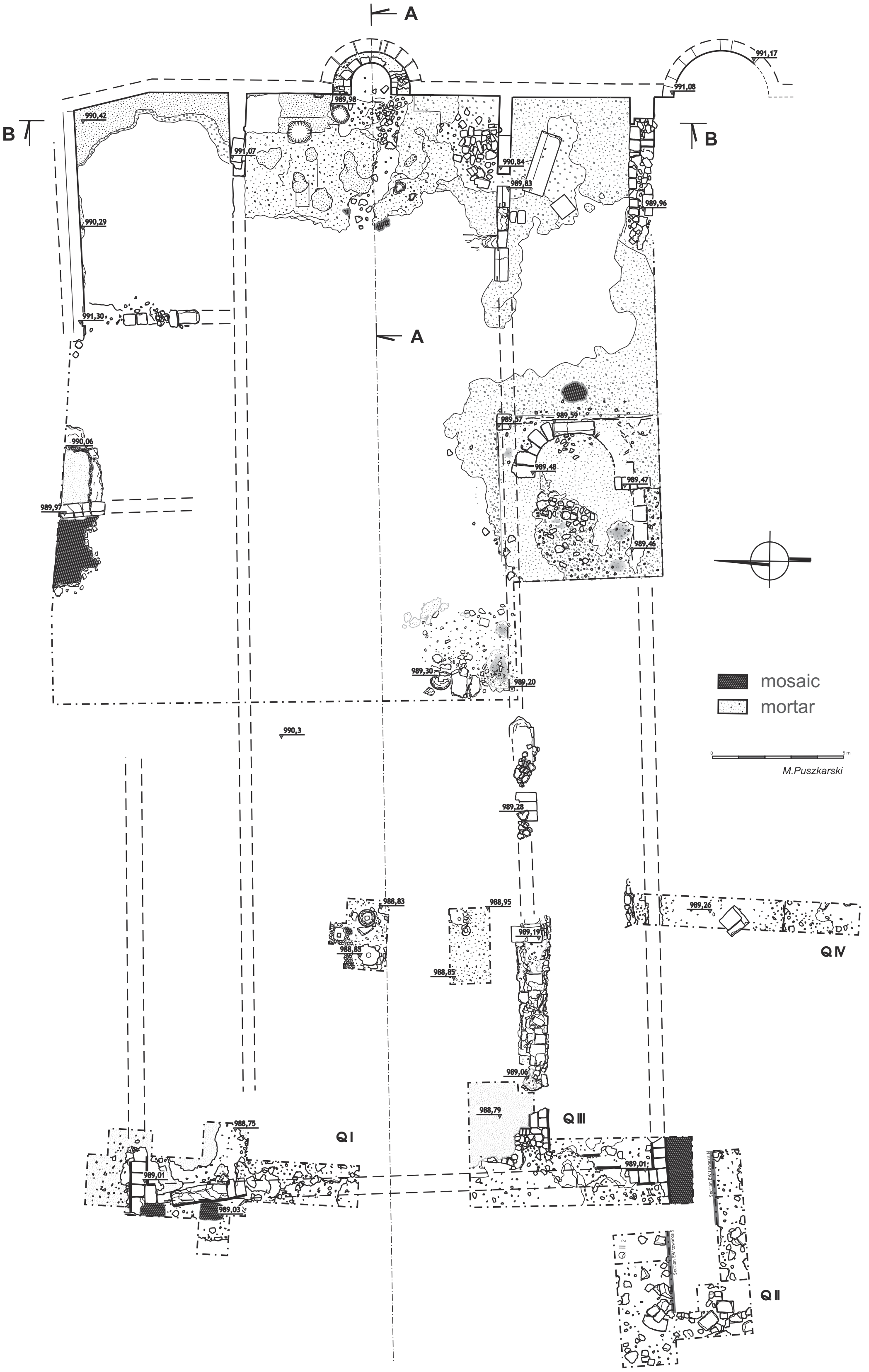


Fig. 2-7. Basilica Q as documented by the PCMA–DGA team in 2005



Fig. 2-8. East wall of Basilica Q

in the southern aisle, suggesting its division into smaller rooms (Herbich 2005: 426, Fig. 3). The existence of these units was not confirmed by subsequent clearing of the debris. Removal of the debris on the outside of the south wall disclosed remains of an apse aligned with the east wall of the basilica. It was provisionally interpreted as a chapel (Waliszewski and Wicenciak 2007: 428).

A horizontal series of rectangular sockets in the east wall of the northern aisle suggests that it had an upper floor supported on wooden beams (Waliszewski and Wicenciak 2007: 425) [*Fig. 2-10*]. Interestingly, sockets of this kind do not appear in the southern aisle.

The east wall of the basilica gives some testimony regarding construction methods and materials. It is surprisingly thin (0.50 m) and most likely was supported by a more massive wall from the east (Waliszewski and Wicenciak 2007: 422). The surviving partition walls between the presbytery and the aisles measure 0.40 m in thickness.

A local sand conglomerate, popularly called *ramleh*, was used as building material (see below, *§ 3.3*). The walls of the basilica are constructed of roughly dressed ashlars of highly diversified sizes, arranged in courses of various heights [*Figs 2-8*, *2-10*]. Some parts of the masonry follow a header-stretcher bond, although in most cases the dimensions of the ashlars are so diverse that the bond is rather random. Only the trapezoidal elements of the semi-dome, which are precisely dressed and matched, seem to be carefully pre-planned. A lime-based mortar was used to bind the elements of the masonry and to seal the joints between them (see below, *§ 3.4*).

Stratigraphic research outside the east wall of the basilica, as well as interrupted courses visible in the northern part of the east wall [see *Fig. 2-10*], indicate that at some point the northeastern corner of the basilica collapsed and was rebuilt, probably using the same stone members. Also, the orientation of the walls changed slightly; the eastern part of the northern aisle became wider and the northeastern corner was cut by five degrees (Waliszewski et al. 2015: 460) [see *Fig. 2-7*]. Interestingly, the sockets for wooden beams supporting the alleged upper floor appear only in the original masonry and were not made in the rebuilt part of the wall, suggesting that the upper floor ceased to be used after the event that caused the collapse of the corner of the building [see *Fig. 2-10*].

2.4.2 Floor mosaics in the basilica(s?)

The floor of Basilica Q was decorated with colorful mosaics. They will be discussed below, in a section devoted to the overall decoration of the basilica and the correlations among the different artistic media (see below, *§ 6.2.3*). At this point, one should point to some puzzling facts regarding the provenance of the mosaics conventionally associated with Basilica Q that suggest they might have belonged to two different churches. Since these mosaics include dated inscriptions which could help establish the dating of the interior decorations of the church—wall paintings included—it is crucial to clarify this matter.

In 1914, Contenau described and photographed mosaic floors located in the western half of a basilica uncovered in Jiyeh (Contenau 1920: 296, Fig. 91; for a reconstruction, see Donceel-Voûte 1988: Pl. 14) [*Fig. 2-11*]. The mosaics were found in the aisles and flanked the central stretch of the nave, which was likely paved with stone slabs. A mosaic associated with a baptistery was located towards the eastern end of the nave, and another mosaic was present in a room adjacent to the southern aisle. The mosaics depicted carpets of red roses against a white background and

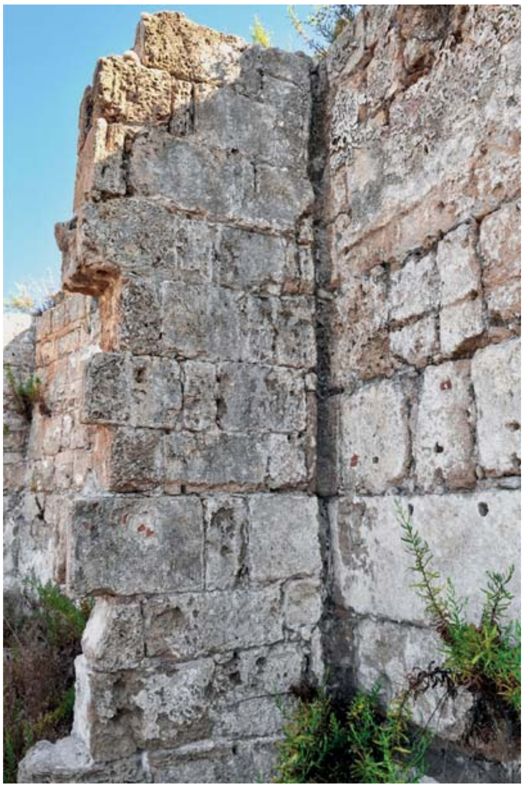


Fig. 2-9. Partition wall between the presbytery and the northern aisle; note that it is not engaged with the east wall



Fig. 2-10. East wall of Basilica Q, a close-up of its northern stretch; note the series of horizontal sockets presumably for the gallery supports, and the interrupted courses of the masonry to the left of it

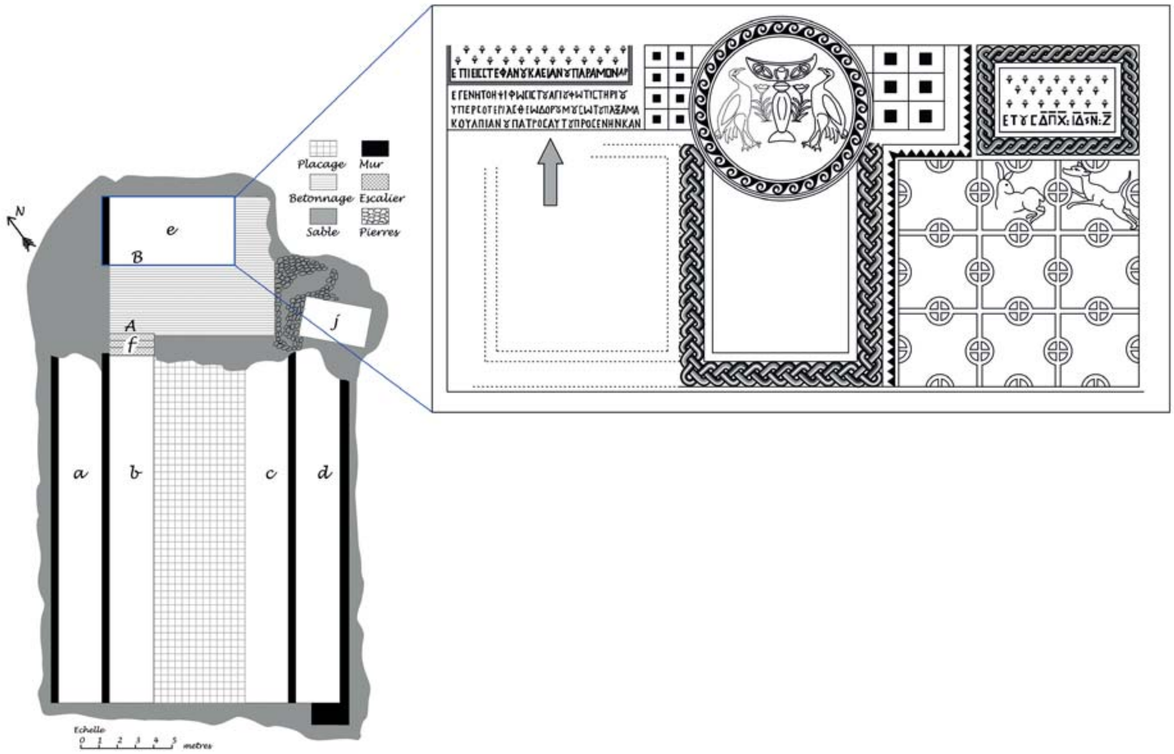


Fig. 2-11. General plan of the basilica excavated by George Contenau and a reconstruction of the mosaic carpet with the inscription commemorating the laying of a mosaic in the baptistery in 574 (marked with an arrow)

framed by a simple two-strand guilloche, as well as panels featuring interlaced medallions. The medallions contained various motifs, such as fruit, animals, and floral designs. There was also a large medallion with a jeweled chalice flanked by birds, a vine, a flock of partridges, and a frame in which fish and birds frolic (perhaps a Nilotic motif) [*Fig. 2-11*].

The mosaic floors discovered by Joumblatt's team in 1987 inside a large basilica were lifted and transferred to the Beiteddine Museum where they underwent conservation treatment and were put on display (see *§ 2.2* and below, *§ 4.1*). They remained unpublished for years, save for a few photographs in a tourist booklet on the Beiteddine Museum (Jounblat, Seeden, and Atallah 1989), a catalog of the 1998 Beiteddine Arts Festival, and a short overview by Odile Wattel de Croizant (1999). Recently, Nada Hélou devoted a chapter of her book on Late Antique mosaics in Lebanon to them (2019: 84–95). The mosaics represent interlaced medallions and grids that contain depictions of fruit, animals and floral designs, geometric panels, interlaced circles, and a carpet of scales with rosebuds framed by a two-strand guilloche [see below, *Figs 6-13*, *6-14*]. There is also a large, nearly-square panel with representations of two lions and two rams inside four interlaced *scuta*, filled with various geometric patterns. It was found in the presbytery [see below, *Fig. 5-10*].

Ever since the excavations carried out in 1987 it has been taken for granted that the basilica unearthed back then (later named Basilica Q) is the same building as Contenau's basilica (e.g., Wattel de Croizant 1999: 121–122; Waliszewski et al. 2008: 27; Abou Diwan 2014: 146;



Fig. 2-12. Reconstruction of the aisle mosaic in the basilica excavated by George Contenau, based on his drawings and photographs; right, detail of the mosaic from the western end of the northern aisle of Basilica Q

Hélou 2019: 85; Burdajewicz 2020b). Supporting the argument in favor of such an identification were the resemblances between the mosaics documented by Contenau and those unearthed in 1987. Indeed, the mosaics from Basilica Q, especially the carpets with interlaced medallions, share some iconographic and compositional features with the ones that he discovered [*Fig. 2-12*]. However, none of the mosaics documented or described by Contenau appear among those lifted in 1987. This can be argued to be an accident of preservation: the former could have been lifted and removed from the site or destroyed prior to the excavation campaign of 1987.[4] However, a comparison of Contenau's account and the alleged location of the mosaics found in 1987 shows strange discrepancies between the two findings.

There is some ambiguity surrounding the works from 1987, stemming from the lack of any documentation which was either not made at the time or has not survived. The only record of that undertaking is the master's thesis of George Nahas (1992), the explorer of the church and conservator of the mosaics.[5] The thesis, devoted to the symbolism of the mosaics, includes a plan that indicates the location of particular panels inside the basilica. Unfortunately, the plan is very general and the location of the mosaics is pinpointed only with numbers, therefore the positioning of the individual panels, especially the small ones, is somewhat imprecise.

The issue with Nahas' plan is that it contradicts to a certain extent Contenau's account. For example, according to the former, a few panels were allegedly set in the western part of the nave [*Fig. 2-13*]. Among them is a mosaic with a Greek inscription bearing the date 477 that is the base for the dating of the basilica.[6] Meanwhile, Contenau notes that the nave did not have a floor

[4] Donceel-Voûte (1988: 354) states that the mosaics, set on new supports, were stored in the past in the museum in Beirut, but does not indicate the source of this information and admits to not being able to find them there.

[5] Written at the Department of Archaeology of the Faculty of Arts, Science, and Humanities of the Lebanese University, under the supervision of Mahmoud Amhz (Nahas 1992). The author would like to thank Jerries Murkus Ballan for translating excerpts from the thesis.

[6] The inscription reads: "Under the venerable bishop Kyrillos this mosaic was made in the month of Dios of the year 587, fifteenth indiction" (translation from French after Abou Diwan 2014: 151 and Hélou 2019: 91).

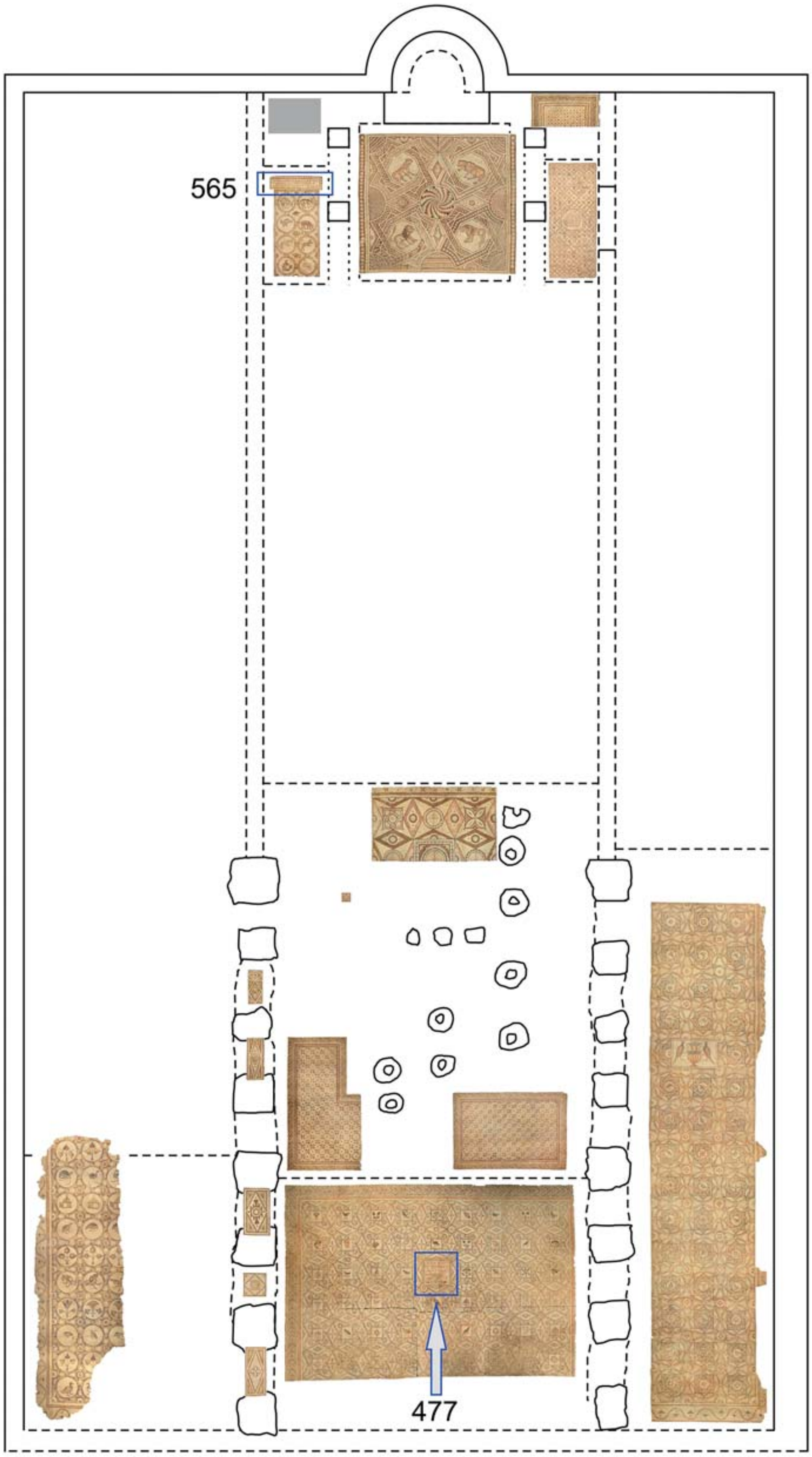


Fig. 2-13. Modern orthophotographs of mosaics from Basilica Q scaled into a plan from George Nahas' master's thesis, following the numbers appearing on the plan; boxes indicate the location of dated mosaic inscriptions

mosaic but must have been paved with stone slabs, which left only imprints (Contenau 1920: 295) [see *Fig. 2-3*].

Furthermore, according to Nahas' plan, two aisle carpets were recovered from the western end of the church. Indeed, this location seems correct: the direction of the presbytery is indicated by the positioning of the animals depicted on these carpets; at the same time, both carpets retain their western edges allowing them to be anchored to the west wall. However, these mosaics look different from those Contenau found in the western part of the church, although the general compositional schemes are similar [see *Fig. 2-12*].

Next, there is the presence of two baptistery mosaics executed only nine years apart. One of them was discovered in 1987 and commemorates the paving of the baptistery in 565.[7] According to Nahas' plan, it was located to the left of the central presbytery carpet (Abou Diwan 2014: Figs 1–2) [*Fig. 2-13*; see also below, *Fig. 6-14* left]. The other one was unearthed by Contenau (Contenau 1920: 296, Fig. 91) [see *Fig. 2-11*]. The carpet containing the inscription was positioned in the nave slightly off axis and surrounded by "concreting" (*betonnage*).[8] It commemorated the laying of the pavement in the baptistery in 574.[9]

Even though the question of the organization of the interior of the basilica is beyond the scope of this study, it should be remarked that both baptistery locations (assuming the inscriptions indicated their position) are rather peculiar. It is also unusual for the decoration work in the two baptisteries, located in two different places, to have occurred within a nine-year span between 565 and 574. There is no recorded natural disaster, such as an earthquake, between 565 and 574 that could explain the need for a new setup and decoration of the baptistery. It could be speculated that some event forced rearrangements of the internal divisions of the church and the moving of the baptistery from the proximity of the sanctuary to the nave. In any case, the existence of two baptistery mosaics is rather strange, especially when considered alongside the other described discrepancies between the discoveries of Contenau and Nahas.

The discordance between the accounts of Contenau and Nahas may be explained in a fourfold manner. First, it could be an oversight on Contenau's part, although it seems impossible that he would have either missed a large mosaic carpet with a dating inscription located, according to Nahas, in the western end of the church, or forgot to mention it in the publication.

Secondly, it is possible that Contenau did not start digging from the western end of the basilica. If it is assumed that the area he exposed covered roughly the central part of the church, he could have missed the pavements discovered later by Nahas at the entrance to the church. This would also explain why Nahas' mosaics are located in the western and eastern parts of the church with

The year, given according to the Sidonian calendar, corresponds to 477. In previous publications, the mosaic is referred to as the "narthex mosaic", whereas it does not come from a narthex but from the western part of the church proper, as shown on Nahas' plan.

[7] The inscription reads: "For the rest of Elias, the *photisterion* (baptistery) was paved with mosaic in December 675 of the fourteenth indiction" (translation from French after Abou Diwan 2014: 147 and Hélou 2019: 91). The year, given according to the Sidonian calendar, corresponds to 565.

[8] The term plausibly points to some kind of mortar bedding that could have been all that remained from a pavement made of slabs of marble or another kind of stone. The mosaic with the inscription no longer exists.

[9] The inscription reads: "Under the pious Stephanos and Aeianos the sacristans, was made the mosaic of the holy baptistery for the salvation of Theodoros the mosaicist, specialist in (glass-paste?) and of Oulpianos, his father. In the year 684, seventh indiction" (translation from French after Contenau 1920: 302 and Donceel-Voûte 1988: 357). The year, given according to the Sidonian calendar, corresponds to 574.

little in between [see *Fig. 2-13*]. However, Contenau's plan of the basilica clearly shows the southwestern corner of the building that marks its western limits. The fragment of the alleged west wall on the plan is 1.10 m thick and Contenau explicitly notes that the exterior walls were 1.10 m thick. In addition, according to the plan—which despite its schematic character is proportional and accurate—he unearthed almost 28 m of the length of the building. Therefore, considering that the basilica discovered in 1987 is about 40 m long, Contenau would have almost certainly come across at least some of the mosaics found decades later by Nahas, either those located at the western end or those in the presbytery.

The third explanation assumes some unintended confusion of mosaics during the campaign of 1987. Nahas worked at and transferred mosaics from various archaeological sites in southern Lebanon. Since he was operating under stress (the Civil War), the evacuation of the mosaics from the sites could have conceivably been hurried if not frenetic at times, hence possible confusion. If so, some of the mosaics on display in Beiteddine, which are labeled as being from the basilica in Porphyreon, could indeed be from elsewhere. This is a rather weak explanation, because Nahas, having been both the excavator of the basilica and the conservator of the mosaics, would not have confused finds from different sites, especially not the mosaics from Jiyeh, which are the most monumental and elaborate carpets displayed in Beiteddine.

Finally, this surplus of mosaics from the basilica of Porphyreon could be explained by the existence of two basilicas. Besides the issues with the distribution of the particular mosaic carpets and the presence of two baptistery inscriptions, there are two other aspects that challenge the conventional and accepted identification of Contenau's basilica with the one discovered in 1987. Firstly, the dimensions. Contenau unearthed only a part of the basilica, so its total length its unknown. According to his plan and the recorded widths of particular mosaic carpets, the interior of the basilica was about 15.5 m wide. Meanwhile, modern measurements taken in Basilica Q show an interior ranging from 19 m to 20 m in width. Even assuming that Contenau did not have precise instruments, a difference of 3.50–4.50 m seems too large to be overlooked or justified by the measuring techniques of the early 1900s. Secondly, the orientation of Contenau's basilica differs from that of Basilica Q [see *Figs 2-3*, *2-7*]. The axis of the latter is only 2 degrees off the east–west direction. Meanwhile, Contenau's basilica is oriented northeast/southwest (its longitudinal axis is 37 degrees off the east–west axis). Therefore, Contenau's basilica and the one unearthed in 1987 (Basilica Q) may, in fact, be two different structures and the location of Contenau's basilica has been lost. One may argue that remains of such a relatively large building (15.50 by at least 28 m) on the premises of modern Jiyeh would not have escaped the attention of modern scholars. However, the poorly-preserved architectural remains left unprotected on the surface (regardless of whether the mosaics had been lifted or not) are likely to have deteriorated by the late 1980s.

The present study accepts that the mosaics discovered and lifted by Nahas in 1987 indeed come from the large basilica of Porphyreon (Basilica Q) and thus, should be considered as part of the same decorative program as the wall paintings. Therefore, the dating of the wall paintings is based—besides other kinds of evidence—on the dates provided by the mosaic inscriptions (discussed above, see also below, *§ 6.4*). Nevertheless, the incompleteness of data from the 1987 excavation campaign and the peculiar distribution of particular carpets on Nahas' plan [see *Fig. 2-13*] call for caution when reconstructing the layout of the floor decoration.

As far as the basilica and mosaics discovered by Contenau are concerned, the present study rejects their identification with Basilica Q, as there are too many discrepancies between the two structures, while the only evidence in favor of identifying them as one and the same building are the stylistic similarities between the mosaics and their location in the area of Jiyeh.

2.4.3 Other types of decoration in Basilica Q

The wall paintings and floor mosaics of Basilica Q were accompanied by marble wall revetment adorning the presbytery part of the east wall. A study of the distribution of the holes for the bronze clamps holding the slabs established that the revetment consisted of two courses of upright rectangular panels and a superposed course of smaller, horizontally arranged panels (Gwiazda 2015) [see below, *Fig. 6-16*]. There is also evidence of an *opus sectile* pavement. The question of the overall decoration of the basilica will be discussed later (see below, *§ 6.2.3*), arguing that a wall mosaic could also have been present in its interior.

Since the ruins of the basilica were cleared of all useful building material in the past (e.g., for the construction of a small mosque at Nabi Younes; Wicenciak 2016: 19), little can be said about architectural elements like columns, bases, capitals, and lintels. Contenau bitterly remarked on not finding any carved stone elements in the basilica he was excavating, save for three smashed capitals left behind by “the indigenous” as useless for construction. He does not specify the kind of stone but provides a photograph that shows a fragment of what appears to be a stylized Corinthian or composite capital (Contenau 1920: 297, Fig. 92). It is possible that stone furnishings, such as the chancel screens or balustrades from Basilica Q shared the same fate: they were robbed and reused in other buildings. A number of broken marble column drums and composite capitals adorn the gardens of the Beiteddine Museum. Since they were brought to Beiteddine around the same time as the mosaics and wall paintings from Jiyeh, they could well be associated with the basilica in question. However, the lack of documentation leaves their attribution unresolved.

Excavations in Basilica Q in 1987 appear not to have yielded any liturgical implements or lighting devices. Some fragments of glass vessels, glass lamps, and windowpanes were discovered in the course of the clearing undertaken in 2004 and 2005 by the PCMA-DGA expedition (Waliszewski et al. 2008: 35–39).

2.4.4 Residential district: architecture and chronology

The main area of the excavated residential district (designated as Sector D) extends to the east, behind the east wall of Basilica Q, and covers an area of approximately 40 acres [*Fig. 2-14*]. It is located about 5 m above the floor level of the basilica. The walls of the buildings are relatively well-preserved, some reaching a height of 2 m. A small part of another residential zone with two-story buildings was discovered north of the basilica (Sector E) [see *Fig. 2-2* top].

The residential district in Sector D is composed of a maze of narrow and winding streets and houses forming an irregular layout. About 80 rooms and units have been identified at the site (Waliszewski, Juchniewicz, and Gwiazda 2012; Gwiazda and Waliszewski 2016). The streets are paved with large fieldstones. An extensive sewage system runs beneath the paved courtyards and streets [*Fig. 2-15*]. Remains of terracotta downpipes, distributed regularly along the external walls of the dwellings, testify to a well-designed rainwater drainage system.

The house construction technique was simple and rather imperfect. The walls were built using random building materials: dressed ashlars used in conjunction with fieldstones of various sizes. Many of the ashlars were in secondary use, as evidenced by the presence of plaster on the internal surfaces of particular blocks or old damages (e.g., missing corners) covered by mortar. Some parts of the walls were executed in a header–stretcher bond, although in most of the cases fieldstones and rubble filled the spaces between the headers. Joints between particular masonry members were thoroughly sealed with mortar. The thickness of the walls averages around 0.40 m, save for



Fig. 2-14. Plan of the residential district (Sector D) located east of Basilica Q; arrows indicate location of paintings discovered *in situ*: *Cat. 44* and *Cat. 76* in the basilica and *Cat. 187* and *Cat. 188* in residential Complex 8

the partition walls, which are thinner (Dzik 2015: 479). The walls of the houses were coated with white plaster on the inside and outside of the buildings [*Figs 2-15*, *2-16*].

The layout of the houses does not reflect any particular concept of the arrangement of space and appears somewhat random, save for several reoccurring features (Waliszewski et al. 2008: 24; Dzik 2015; Waliszewski and Burdajewicz 2019). Most of the buildings are equipped with a paved, presumably open courtyard and several smaller rooms. The principal room of each house was paved with a crude white mosaic, while secondary rooms had stone or plastered floors [see *Fig. 2-14*].

Many of the houses appear to have had an upper floor. This is suggested by remains of staircases as well as repeating series of round or rectangular sockets in the walls, designed to accommodate wooden transversal beams supporting the upper floor (Gwiazda and Waliszewski 2016: 47–48). Remains of a mortar bedding with a few tesserae noted by Saidah above the sockets suggest that some of the upper floors were paved with mosaics (Saidah 1977: 40). Indeed, a small mosaic with a representation of a striding lion was found on the upper floor of a building in Sector E (Gwiazda and Waliszewski 2016: 44, Fig. 12). Some houses could have been equipped with wooden galleries (Dzik 2015).

A number of house complexes were distinguished (Waliszewski et al. 2008: 24; Dzik 2015), including one that draws particular attention by its decoration and the artifacts found inside it. Complex 8 consists of four units (paved courtyard D11, rooms D32–D34), arranged around a central chamber with a floor mosaic (room D12). Even though the mosaic is white, it is a touch more refined than the other mosaics from the residential district. It features a three-tesserae-wide frame enclosing the main panel, which is characterized by a diagonal arrangement of the cubes. On the two longer sides of the room are two pillars that supported the presumed upper floor; a large rectangular niche occupied the center of the north wall (Waliszewski, Juchniewicz, and Gwiazda 2012: 430).

Two crosses and Greek inscriptions made with red paint on white plaster flanked the doorway leading from courtyard D11 to room D12 (*Cat. 187*, *188*; see below, *§ 5.9*). They were discovered and documented by Saidah, who also mentioned a large number of ashlars retaining painted plaster fallen from the upper floors (he did not specify whether they came only from that house or were also found in other complexes). Among the depictions, Saidah listed representations of haloed human figures, palms, pomegranate trees, leaping "feline" and "equid" animals, and genre scenes with working peasants (Saidah 1977). The presumed mosaic paving of the upper floor, along with fragments of figural paintings, suggest that the upper rooms were more elegant and refined than the ground-level rooms.

Room D12 yielded several bronze liturgical objects, which hint at the special function of Complex 8. The finds included candelabra, censers, bronze lamps, and a chalice containing some organic matter, as well as a large, melted and deformed leaden object. This prompted Saidah to suggest that the house could have been a bishop's residence[10] or else, that it could have belonged

[10] The names of bishops of Porphyreon appearing in various church documents led Saidah to believe that the site he had excavated was an episcopal see. He names Bishop Thomas of Porphyreon (who participated in the Council of Chalcedon), Theodore (active approximately 518), Christopher (present at the provincial council in Constantinople in 526) and Paul (approximately 565–578; Saidah 1977: 40). However, there is no evidence that the northern Porphyreon was indeed an episcopal see; the bishops most likely came from the southern Porphyreon.



Fig. 2-15. Paved street (street 8, view towards west) with a drainage channel as documented in 1975



Fig. 2-16. House in the residential district as documented in 1975; looking southward; in the foreground, rooms 4 and 2

to the sanctuary(?) of Virgin Mary mentioned by Procopius. Unfortunately, these objects are now lost. Other domestic complexes contained only ordinary items, such as grindstones and storage vessels (Saidah 1977: 40–41).

Each of the house complexes underwent several phases of architectural changes, although they are difficult to discern and date. A thorough stratigraphic and architectural study has been carried out in one of the complexes and it revealed three phases of remodeling (Dzik 2015). About one-third of the walls from the Late Antique period followed the layout of earlier structures. Another third was added later, whereas the remaining third was difficult to interpret. Generally, the main phase of the buildings seems to be associated with the mosaic floors.

Pottery collected in the residential district during the most recent PCMA-DGA excavations did not provide sufficient data on the chronology of the occupation of the site in the Late Antique period. In some complexes, the latest pottery finds were dated to the 2nd century CE, proving that Saidah had removed all the later layers (Wicenciak 2016: 39); other rooms were backfilled with soil containing fragments of vessels dating from the 6th to the early 7th century. The probes excavated in Sector E yielded an array of pottery types dating from the 4th to the 7th centuries (Gwiazda and Waliszewski 2016: 45).

The latest numismatic find from the most recent excavations is a halved follis of Justin II (r. 565–574), found on the street behind Basilica Q (Waliszewski et al. 2015: 459). However, excavations conducted in 1975 yielded a significant number of coins of Heraclius (r. 610–641; Saidah 1977: 43), which are the latest dating finds. As noted above, no pottery later than the beginning of the 7th century has been forthcoming.

Numismatic finds from the residential district suggest that Porphyreon was abandoned during the first half of the 7th century, possibly following some violent event (see below, *§ 6.4*). Contenau noted burnt areas on the mosaics in his basilica (1920: 296). Saidah was certain that some of the residential buildings were consumed by intense fire. He mentions remains of charred wood in sockets in the walls where wooden beams were once installed, a thick ash layer on the room floors, and melted and deformed metal items amalgamated with pottery (Saidah 1977: 40). Given the fact that the ground-level rooms do not retain traces of fire (such as blackened plaster), and that the liturgical objects found in Room D12 were relatively well preserved, it is to be supposed that the most severe fire affected the upper floors of the houses.

Chapter 3

THE MAKING OF THE WALL PAINTINGS: ARCHAEOMETRIC STUDY

3.1 State of research

The survival of any type of artwork or object of material culture is determined by a number of factors, such as the condition when it was abandoned, the way in which it was destroyed, the deposition environment, and treatment after discovery. Execution technique is no less than critical for the enduring of a piece of art. For example, in the case of Roman-period wall paintings, careful selection of materials for the making of the substrate layers, methods of preparation and application, and elaborate painting techniques come together for an (often) excellent state of preservation, still to be admired nearly 2000 years later. This remarkable durability of Roman wall paintings and stuccos has long fascinated scholars and prompted technical investigations into the means and materials employed by the artists and craftsmen, even before the advent of modern archaeometry.[1]

With regard to Late Antique wall paintings, however, research on the technical characteristics has not been as widespread, presumably because the modest and poorly preserved remains are somewhat less appealing than Roman paintings. Only a few technical studies of wall paintings and wall plasters from the Late Antique period in the southern Levant have been carried out and published so far. Listed here are analyses of fragments of wall paintings from the Grotto of the Annunciation in Nazareth (Capasso Carola 1969), a comprehensive examination of wall plasters in Jabal Harun, Petra (Danielli 2008), analyses of various mortars and plasters from Umm el-Jimal (Dunn and Rapp 2004; Al-Bashaireh 2019), analysis of a sample from the Southern Church in Nitzana/Nessana (Freidin and Meir 2005), studies on remains of wall paintings from Hippos-Sussita, Sa'adon, and Chhim (Burdajewicz 2017; 2018; 2021), and investigation into the use of Egyptian blue in Shivta/Sobota (Linn, Tepper, and Bar-Oz 2017). As a result, the methods, means, and materials applied in the process of making wall paintings in Late Antiquity are nearly as obscure as their appearance and aesthetics. Furthermore, it has not been ascertained whether Late Antique wall painting is from a technical point of view a continuation or a discontinuation of Graeco-Roman workshop traditions and procedures.

The wall paintings from Porphyreon provide an excellent opportunity to fill the gap in the state of research. Moreover, since the materials used and the manner of their application affect an artwork's appearance as well as durability, archaeometric research can help to appraise their aesthetics and understand better the processes responsible for their deterioration.

[1] See in general Cagiano De Azevedo 1958; Barbet and Allag 1972; Ling 1991: 198–211; Béarat et al. 1997; Cuní 2016. Levant: Corbeil, Oleson, and Foote 1996 (Jordan); Kakoulli, Fischer, and Michaelides 2010 (Cyprus); Vieillescazes, Joliot, and Ménager 2016 (Nea Paphos); Buisson et al. 2015 (Palmyra); Uvarov, Popov, and Rozenberg 2015 (Omrit); Rozenberg 2016 (Jerusalem); Piovesan et al. 2016 (Magdala); Linn 2017 (Caesarea Maritima); Rozenberg 1997 (Jericho); Porat and Ilani 1998 (Jericho, Masada); Edwards, Farwell, and Rozenberg 1999 (Jericho).

3.2 Methodology

3.2.1 Methodological approach

A wall painting is a multilayered structure in which the character and properties of each subsequent layer are affected by the previous one. For example, surface irregularities of the masonry need to be compensated for with a coat of mortar of appropriate thickness, while the quantity and type of aggregates present in the plaster and its surface finish influence the final appearance of the paint layer (regarding, for example, its sheen, texture, and color depth). Such correlations are often overlooked in archaeometric studies, which rely heavily on detailed analyses of samples, but often miss the bigger picture. As for the wall paintings from Porphyreon, the examination began from the lowermost substrate layers and proceeded towards the paint layer in an attempt to retrace the painting process and to understand how the properties of particular constituents of the paintings are mutually affected. For this purpose, the raw materials were identified and the application techniques were examined: buildup and composition of substrate layers, presence of preparatory marks, painting techniques, and paint handling.

There are many instrumental methods available to researchers, selected in compliance with research questions and budget for research. The more popular and accessible they become, the less attention is paid to macroscopic observations. In the present study, a two-step research approach was assumed, combining macroscopic examination with detailed analyses. The first step was to examine firsthand the mortars and plasters surviving *in situ* at the site, as well as fragments of wall paintings preserved on faces of ashlars and stones stored in the Beiteddine Museum. The number, thickness, and appearance of substrate layers was thus determined, as was the surface finish of the plaster, and the evidence of preparatory marks. Examination of the paintings in raking light helped to appraise the paint handling and brushwork. The macroscopic study was supplemented with a close-up examination of the substrate and paint layers using a portable digital microscope (TPL 1,3MPix 1×-40×/200×) connected to a laptop computer.

The fact that the wall paintings are still fixed to their original supports was an advantageous circumstance for the present study. Fragments of plaster found in debris may not necessarily preserve all of the substrate layers, hence the investigation could turn out to be incomplete. Furthermore, thanks to the fact that at the outset of the present project the wall paintings did not have protective mortar bands applied to their edges, it was possible to examine the substrate layers in detail.

The second, archaeometric step of the study comprised microchemical and instrumental analyses of particular components of the substrate and paint layers. The samples were collected from ashlars and stones stored in the Beiteddine Museum except for a few that came from loose fragments found in debris and deposited in the storeroom of the Directorate General of Antiquities (DGA) at the archaeological site of Chhim [*Table 3-1*]. Since both the blocks and the loose fragments were placed in storage soon after their discovery, they were not subject to weathering caused by exposure to environmental conditions. The samples were imported to Poland following appropriate permits from the DGA.

The analyses comprised: (a) optical microscopy; (b) microchemical tests performed on samples of mortars, plasters, and pigments; (c) petrographic analysis of thin sections of mortars and plas-

ters; (d) scanning electron microscopy with energy-dispersive X-ray spectroscopy (SEM-EDS); and (e) Raman spectroscopy used for detailed analyses of pigments. Observation of cross sections of paint and plaster under an optical microscope and back-scattered electron (BSE) imaging served to examine the microstratigraphic features of the wall paintings. Liquid chromatography with mass spectroscopy (HPLC-MS) was used to determine the presence of organic binders in paint layers.

The sample numbers encode the following information: "Jy" for Jiyeh and a three-digit number (e.g., Jy001). Since the majority of them were taken from registered ashlars and stones, the corresponding catalog numbers are given for reference (see also Concordance Table at the end of the volume).

3.2.2 Instruments and methods

Optical microscopy

Optical microscopy[2] (OM) was used to examine paint layer stratigraphy and the visual appearance of pigments prior to further tests. For microchemical identification of the pigments, the samples were dispersed on glass slides and examined under reflected light microscopy (RLM) with the use of a Prolab MSZ 45× stereoscopic microscope and under transmitted light microscopy (TLM) with the use of a Nikon Eclipse 50i 1000× biological microscope. For examination of the stratigraphy, samples of the paint layer were embedded in a synthetic resin (Meliodent®) and polished to achieve a clear cross-section. They were examined under a Nikon SMZ 1000 stereoscopic microscope (160×) and photographed under a Nikon Eclipse 50i stereoscopic microscope connected to a Nikon Coolpix 8400 digital camera.

Microchemical tests on pigments

Simple microchemical qualitative spot tests served to identify the pigments. The following procedures were used for the identification of particular compounds:

- **Fe^{3+} cations**: a sample is dissolved in concentrated hydrochloric acid (HCl) and treated with 0.125*M* potassium ferrocyanide ($K_4[Fe(CN)_6]$). In the presence of Fe^{3+} ions, a dark blue amorphous residue of ferric ferrocyanide III ($Fe_4[Fe(CN)_6]_3$) appears.
- **Fe^{2+} cations**: a sample is dissolved in 3*M* HCl and evaporated. The dried residue is treated with 2,2'-Bipyridine ($C_{10}H_8N_2$). In the presence of Fe^{2+} ions, the sample assumes a pink color.
- **Ca^{2+} cations**: a sample is dissolved in concentrated HCl and treated with 1.5*M* sulfuric acid (H_2SO_4). Gentle heating of the solution results in the crystallization of bundles of gypsum needles ($CaSO_4 \cdot 2H_2O$).

[2] Examination of pigments under optical microscopy, microchemical tests, and examination of cross sections of paint layers were carried out by Kamila Załęska (Science Department of the Faculty of Conservation and Restoration of Works of Art, Academy of Fine Arts in Warsaw).

Table 3-1. List of collected samples, giving corresponding catalog numbers, type of sample and type of performed analyses

Number	Cat.	Type of sample	Analysis
Jy001	***202***	Stone fragment	Petrographic thin section
Jy002	***37b***	Gray preparatory mortar	Petrographic thin section
Jy003	***39***	Gray preparatory mortar	Petrographic thin section
Jy004	***126***	Gray preparatory mortar	Petrographic thin section
Jy005	***93***	Gray preparatory mortar	Petrographic thin section
Jy006	***62***	Plaster	Petrographic thin section
Jy007	***62***	Preparatory mortar	Petrographic thin section
Jy008	***226***	Plaster	Petrographic thin section
Jy009	***226***	Preparatory mortar	Petrographic thin section
Jy010	***169a***	Plaster	Petrographic thin section
Jy011	***169a***	Preparatory mortar	Petrographic thin section
Jy012	***246***	Plaster	Petrographic thin section
Jy013	***246***	Preparatory mortar	Petrographic thin section
Jy014	***252***	Plaster	Petrographic thin section
Jy015	***252***	Preparatory mortar	Petrographic thin section
Jy016	***214***	Plaster	Petrographic thin section
Jy017	***214***	Intermediate layer of mortar	Petrographic thin section
Jy018	***214***	Preparatory mortar	Petrographic thin section
Jy019	Loose	Paint layer buildup	Stratigraphic cross section
Jy020	Loose	Paint layer buildup	Stratigraphic cross section
Jy021	Loose	Paint layer buildup	Stratigraphic cross section
Jy022	***79b***	Dark red pigment	Microchemical test
Jy023	***73***	Light red pigment	Microchemical test
Jy024	***172***	Yellow pigment	Microchemical test
Jy025	***45b***	Dark green pigment	Microchemical test
Jy026	***138***	Light green pigment	Microchemical test
Jy027	Loose	Green pigment	SEM-EDS
Jy028	***170a***	Green pigment	Raman spectroscopy
Jy029	Loose	Green pigment	Raman spectroscopy
Jy030	***50***	Blue pigment	Microchemical test
Jy031	Loose	Blue pigment	SEM-EDS
Jy032	***77***	Black pigment	Microchemical test
Jy033	***77***	White impasto	Microchemical test
Jy034	Loose	Plaster with paint layer	HPLC-MS; BSE image
Jy035	Loose	Plaster with paint layer	BSE image
Jy036	Loose	Plaster with paint layer	BSE image

- **Pb^{2+} cations**: a sample is dissolved in concentrated nitric acid (HNO_3) and evaporated. The dried residue is treated with a drop of diluted acetic acid (CH_3COOH) and a drop of potassium iodide (KI). In the presence of Pb^{2+} ions, yellow, hexagonal crystals of lead iodide (PbI_2) precipitate.
- **Cu^{2+} cations**: a sample is treated with a 0.125*M* solution of potassium ferrocyanide ($K_4[Fe(CN)_6]$) and a drop of 3*M* HCl. In the presence of Cu^{2+} ions, a reddish-brown residue of $Cu_2[Fe(CN)6]$ appears.
- **SiO_3^{2-} anions**: a sample is dissolved in concentrated HNO_3 and evaporated. The dried residue is treated with a drop of acidified solution of ammonium heptamolybdate ($(NH_4)_6Mo_7O_{24}$). In the presence of SiO_3^{2-} ions, a microcrystalline yellow residue precipitates.
- **gypsum ($CaSO_4 \cdot 2H_2O$)**: a sample is dissolved in concentrated HCl. Gentle heating of the solution results in the recrystallization of characteristic bundles of gypsum needles ($CaSO_4 \cdot 2H_2O$).

Microchemical tests on mortars and plasters

Microchemical tests on samples of mortar and plaster comprised treatment with H_2O to determine the solubility and swelling of the renders, solubility tests in 3*M* HCl, the reaction for gypsum recrystallization, and detection of Fe^{2+} and Fe^{3+} cations and SiO_3^{2-} anions (see above).

Petrographic thin sections

Petrographic thin sections[3] of mortar and plaster served to determine the type of binder and aggregates and the volume participation of each of the components. The sections were analyzed under a Zeiss Axiolab polarizing microscope connected to a Canon G2 digital camera and with a Nikon petrographic polarizing microscope 480× connected to a Nikon Sight DS-5Mc camera. Component ratios were established with the aid of JMicroVision v1.2.7 and NIS-Elements AR computer software.

SEM-EDS

The primary identification of green and blue pigments by means of microchemical tests was further confirmed using a scanning electron microscope equipped with energy dispersive X-ray spectroscopy (SEM-EDS).[4] Furthermore, back-scattered electron (BSE) images of cross sections of paint and plaster revealed the microstratigraphic features of the wall paintings. Instruments included a Jeol JSM 6510 scanning electron microscope and an EDS detector by Oxford Instruments. The spectra were analyzed with the use of INCA Oxford Instruments software. The measurements were carried out under low vacuum conditions (50 Pa), with 20kV acceleration voltage, a counting time of 35 seconds, and a 10-mm distance.

[3] Microchemical tests on mortars and plasters as well as petrographic thin sections were carried out and interpreted by Anna Puchta (Science Department of the Faculty of Conservation and Restoration of Works of Art, Academy of Fine Arts in Warsaw) and Wojciech Bartz (Institute of Geological Sciences, University of Wrocław).

[4] The SEM-EDS and Raman spectroscopy and the liquid chromatography with mass spectrometry analyses were carried out by Sylwia Svorová Pawełkowicz (Laboratorium Konserwacji Sylwia Svorová Pawełkowicz).

Raman spectroscopy

Raman spectroscopy was used to ascertain the exact mineralogical composition of the green pigment. Raman spectra were obtained from polished cross sections of paint layers with a Nicolet Almega XR Raman spectrometer, equipped with an Olympus confocal microscope. Depending on the nature of the sample, measurements were made using 785 and 532 nm laser excitation lines. Raman spectra were collected in the spectral range from 100 to 1300 cm^{-1} with a spectral resolution of 10 cm^{-1} and an average acquisition time of 90 s.

Mass spectrometry

Liquid chromatography with mass spectrometry (HPLC-MS) was used to investigate the presence of organic substances in paint layers. The measurements were carried out using a UltiMate™ 3000 RSLCnano system (Thermo Scientific, Dionex, Germany) connected to a MaXis Impact ESI-Q-TOF mass spectrometer (Bruker Daltonics, Germany). Peak lists were extracted from the raw data by Compass DataAnalysis software (Bruker Daltonics, Germany). Proteins were identified using Mascot Server 2.2.04 (Matrix Science, UK) and the SwissProt protein database.

3.3 Masonry support

Among the 254 masonry elements gathered in the Beiteddine Museum, 204 (approximately 80%) are more or less dressed ashlars, meaning that they are of a generally rectangular shape, with all sides dressed or just the face leaving the sides unshapely or roughly hewn. Some 20 masonry elements were dressed to a particular shape: voussoirs (*Cat. 171–178*, *281*?), corbel-like elements (*Cat. 31acd*, *229*), an ashlar with a protruding profile (*Cat. 77*), elements carved to be placed above an arch (*Cat. 94*, *129*), and elements of a hoodmold (*Cat. 79*). Of the lot, 20 elements are fieldstones with no evidence of dressing. The original shape of 10 elements is difficult to establish because of their fragmentary state.

The masonry elements come in various sizes. The largest are *Cat. 57* (31 × 67 × 19 cm), *Cat. 65* (34 × 57 × 18 cm), *Cat. 88* (33 × 56 × 22 cm), *Cat. 94* (41 × 75 × [11] cm; this last dimension is not original as the back of the element was trimmed in the past).

At least 34 ashlars were used broken or incomplete in the construction of the basilica and the residential complexes. Mortar covers their broken corners and damaged sides suggesting that they might have come from dismantled earlier structures and were reused in the construction of the Late Antique buildings.

The building material that was employed in Porphyreon is a medium-to-coarse-grained calcareous sandstone, commonly known as *ramleh*.[5] It is composed of quartz grains, fragments of shells and corals, carbonate grains, and pieces of older limestones and dolomites, cemented by calcium carbonate (Brandon et al. 2014: 148, 237). *Ramleh* originates from ridges which formed from Pleistocene dunes and which stretch along the entire Eastern Mediterranean coast, from

[5] It is also referred to as *kurkar*, the term used in Palestinian Arabic and modern Hebrew. See Marriner et al. 2014.

Turkey to Egypt (Marriner et al. 2014). The same rock was used for construction and preparation of mortars in both Caesarea Maritima and Alexandria (Linn 1996: 4; Brandon et al. 2014: 148). Petrographic analysis of a stone sample (Jy001) shows that it consisted of about 48% (by volume) calcium carbonate matrix; 40% fragments of shells and corals; 8–10% grains of quartz; and 1–2% crumbs of crystalline limestone [*Fig. 3-1* bottom]. Since *ramleh* is a sedimentary rock of marine origin, particular elements of the masonry display significant differences in compactness and structure. Stones consisting of sand-sized or smaller, tightly packed grains are generally homogeneous and compact. The ashlars made of this type of rock tend to be neatly hewn and show diagonal gouges left by masons' tools [*Fig. 3-1* top]. Other stones, which contain fragments of shells and skeletal remains of marine organisms of various sizes beside the grains of quartz, may be either relatively firm, or porous and crumbly [*Fig. 3-1* center].

The surviving east wall of the basilica is constructed of dressed ashlars of diverse size, arranged in courses of various height, in a bond that is more random than organized, even if sections appear to follow a header–stretcher pattern (see *§ 2.4.1*). Only the trapezoidal elements of the semi-dome of the apse are neatly dressed and precisely fitted. Most of the masonry elements from the basilica that are stored at Beiteddine (139) were dressed; four are fieldstones, and seven are too fragmentary to determine. In addition, there are eight or nine voussoirs (*Cat. 171–178*, *281*?), four elements of a hoodmold (*Cat. 79*), two elements carved to be placed above an arch (*Cat. 94*, *129*), and one ashlar with a protruding profile (*Cat. 77*).[6]

Random building materials were used for construction in the residential district: dressed ashlars were alternated with fieldstones of various sizes. Some parts of the walls were executed in a header–stretcher bond, although for the most part the spaces between the headers were filled with fieldstones and rubble. Among the masonry elements originating from the residential district and stored at Beiteddine, 83 were dressed, 16 are fieldstones, whereas three are too deteriorated to identify their shape. There are only four elements dressed to a particular, corbel-like shape (*Cat. 31acd*, *229*) but they seem to have been reused (see *§ 6.2.4*). This also applies to numerous ashlars that present old damages covered with mortar.

3.4 Mortar composition

The two types of mortar described in this section were employed in the construction of the basilica and residential complexes, applied in ample quantities to the joints between the ashlars and to the cavities and irregularities of the wall surfaces. Since they were successively coated with plaster and painted, they became constituents of the wall painting substrate [*Fig. 3-2*]. In other words, they act as preparatory mortars for the wall paintings even though they were not intended strictly as such.

[6] On the possible location of particular fragments within the basilica see *§ 6.2.1*.

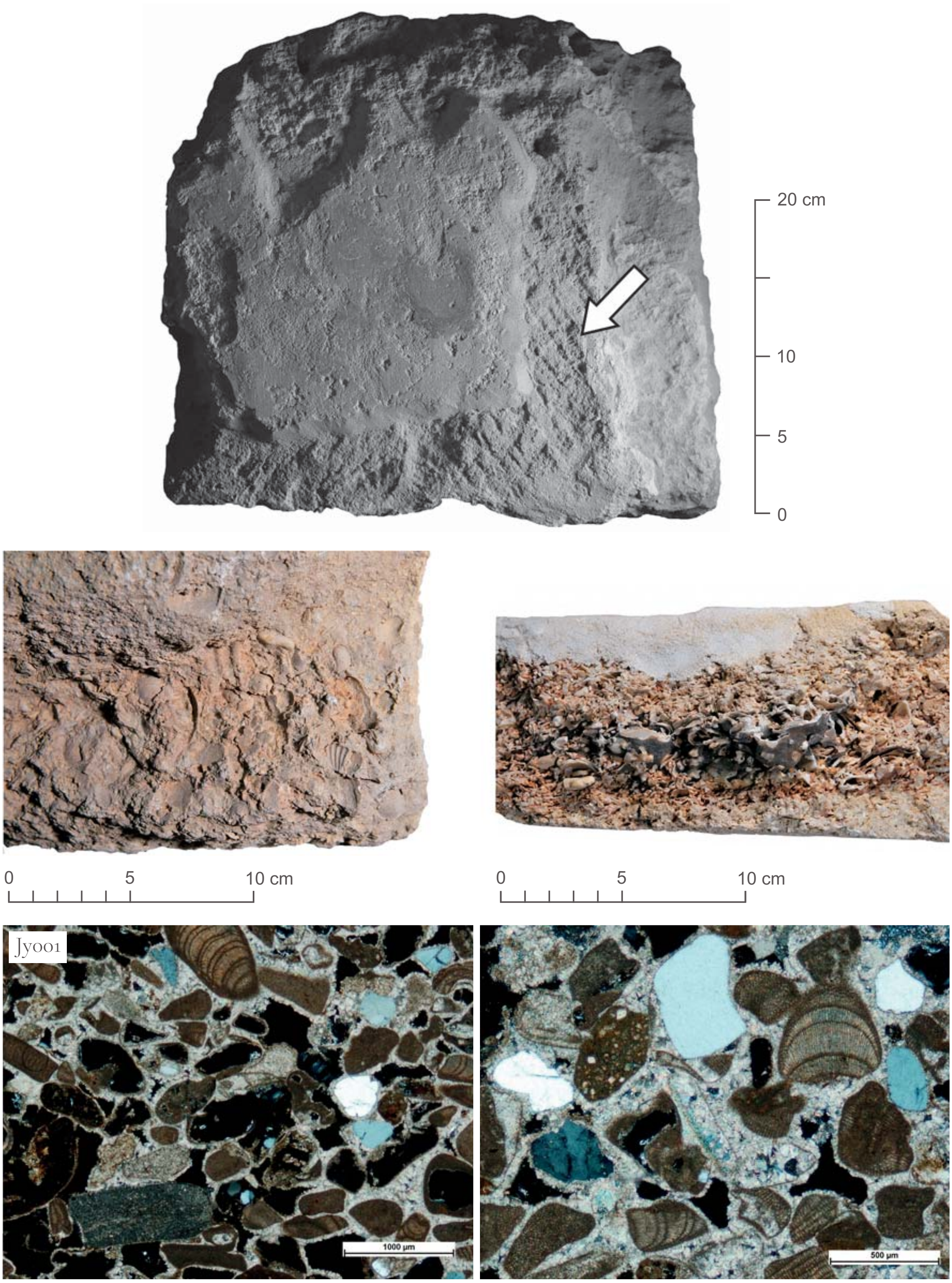


Fig. 3-1. Construction material used at Porphyreon – *ramleh*: top, block of stone revealing diagonal marks left by masons' tools (*Cat. 173a*), view in raking light; center left, compact variant (*Cat. 277*), note fragments of shells and skeletal remains of marine organisms well-cemented by the calcium carbonate binder; center right, porous variant (*Cat. 153*), showing strata of conglomerated fragments of shells and skeletal remains of marine organisms of various size; bottom, petrographic thin section

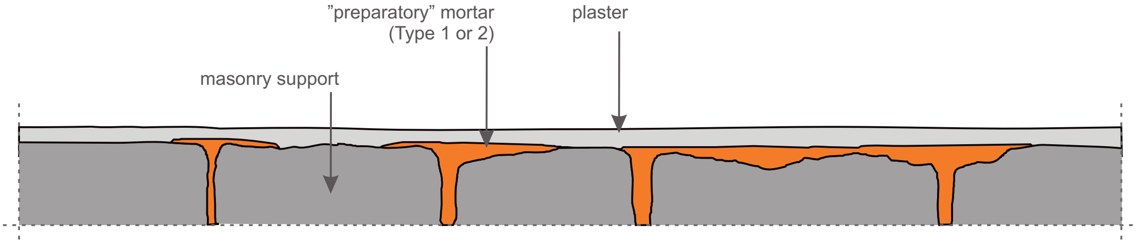


Fig. 3-2. Substrate of wall paintings from Porphyreon: masonry, mortar used for the construction of the masonry (Type 1 or 2), and plaster

3.4.1 Type 1: gray mortar with charcoal

The first type of mortar is characterized by a gray color, chunks of charcoal, and large (up to 6–7 mm) off-white lumps of lime dispersed throughout its body.[7] It is still clearly visible inside the joints of the east and the original part of the north wall of the basilica [*Fig. 3-3* top], and underneath the plaster on some of the ashlars [*Fig. 3-3* center and bottom]. It is plausible that this mortar was used for the construction of the outer walls of the basilica. Mortar with ash and olive seeds was also attested in the foundations of the basilica (Waliszewski et al. 2015: 459). Altogether, this kind of mortar was noted on six masonry elements from the basilica (*Cat. 42*, *91*, *93*, *126*, *148*, *197*), and 18 from the residential district (*Cat. 11*, *37b*, *39*, *52*, *80*, *112*, *119*, *120*, *135*, *136*, *139*, *142*, *147*, *163*, *167*, *186*, *233*, *241*).

Notably, most of the fragments coated with the first kind of mortar also have Type 2 mortar (see below *§ 3.4.2*): basilica – *Cat. 42*, *93*, *126*, *148*; residential district – *Cat. 11*, *37b*, *52*, *80*, *112*, *120*, *135*, *136*, *147*, *163*, *233*, *241*. In these instances, the gray mortar with charcoal admixture appears on the faces of the masonry elements and/or on their sides, whereas Type 2 mortar covers their back and, at times, also their lateral surfaces.

Mortar filled the joints between the masonry elements and compensated for the irregularities of the wall faces, hence the thickness of the applied layer varies from several millimeters to a few centimeters. Microchemical and petrographic analyses were performed on two samples of mortar from the houses (Jy002, Jy003) and two from the basilica (Jy004, Jy005). The composition of the samples and component ratios are given in the table [*Table 3-2*].

Despite slight differences in the proportions of the constituents the samples exhibit a common composition, without marked differences between the samples from the basilica and the houses [*Fig. 3-4*]. They all contain a micrite (microcrystalline calcium carbonate) binder constituting no more than 64% of the sample volume. The dominant type of aggregate is quartz, followed by crushed limestone and bioclasts (fragments of shells and skeletal remains of marine organisms). Particles of charcoal (0.5–1.5 mm) are responsible for the overall gray color of the mortar. Accessory inclusions such as amphibole and fragments of claystone or unfired pottery appear occasionally, the latter fragments in samples Jy002 and Jy004.

[7] The lumps are relatively rare and inconsistently distributed, so their intentional addition to the renders is doubtful. Lime lumps are not uncommon in historical mortars. They are either chunks of slaked lime that was not thoroughly mixed with the aggregates or they could be attributed to the use of quicklime. See Bakolas et al. 1995; Bruni et al. 1997; Veiga 2017: 133.



Fig. 3-3. Type 1 mortar: top, in the joints of the masonry of the east wall of the basilica; center, underneath the plaster (*Cat. 197*); bottom, microphotograph showing charcoal particles

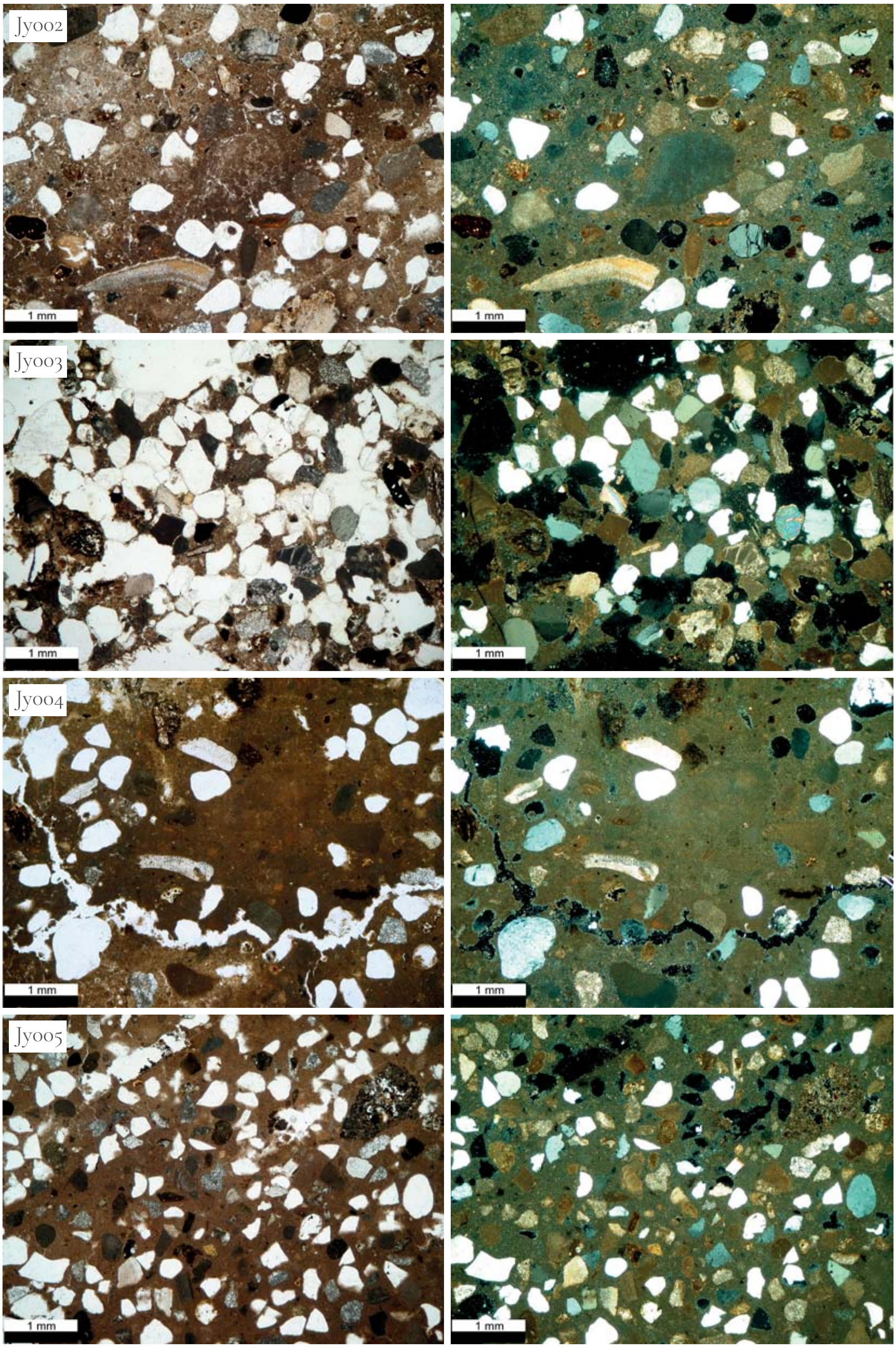


Fig. 3-4. Petrographic thin sections of samples of Type 1 mortar: left, one polarizer; right, two crossed polarizers

Table 3-2. Type 1 mortar: composition and component ratios (dominant type of aggregate in bold)

Sample Cat.	Binder content Type	Quartz Grain size	Crushed limestone Grain size	Bioclasts Grain size	Other (including charcoal)
Jy002 ***Cat. 37b***	~55.5% micrite	**~24%** <0.8 mm	~12% 0.6–0.8 mm	~6% 0.8–1 mm	<2.5%
Jy003 ***Cat. 39***	~62% micrite	**~18%** <0.5 mm	~14% <0.8 mm	~5.5% <1 mm	~0.5%
Jy004 ***Cat. 126***	~64% micrite	**~19%** <0.8 mm	~7.5% 0.6–0.8 mm	~8% <0.8–1 mm	~1.5%
Jy005 ***Cat. 93***	~51% micrite	**~19.5%** ~0.5 mm	~19% <0.8 mm	~8% <0.6 mm	~2.5%
Average	~58%	**~20%**	~13%	~7%	~2%

Quartz is monocrystalline, without intrusions of other minerals. Particles are sub-rounded, rounded, and sub-angular, although the lattermost form is seldom encountered. Grains generally measure 0.5–0.6 mm, occasionally reaching up to 0.8–1 mm. Fragments of crushed limestone are composed either of sparite or micrite. The latter type is either "pure" or includes fragments of microfossils. Particles of crushed limestone occur in either spherical or slightly oblong shapes not exceeding 0.8 mm in size; they are sub-rounded, sub-angular, or occasionally angular (sparite). Bioclasts come in various shapes.

The filler is uniform overall. Its grains measure 0.5–0.6 mm, with some raging up to 1 mm (mainly bioclasts), indicating sifting of the material before its addition to the mortar. The only large inclusions are chunks of charcoal, which measure about 5 mm. Samples Jy003 and Jy005 show a somewhat denser distribution of the aggregate, smaller grain size of quartz, and higher content of accessory ingredients, including charcoal.

3.4.2 Type 2: off-white mortar

The second type of mortar used for the masonry is characterized by an off-white color and dense body with a fine, homogeneous, tightly arranged aggregate discernible to the naked eye. Occasionally, large lumps of lime occur throughout the body (see Type 1 mortar above). This type of mortar appears in the basilica, on the walls separating the presbytery from the aisles and on the vast majority of ashlars and stones coming from both of the complexes. As noted above, on some of the masonry elements it occurs alongside Type 1 mortar.

Type 2 mortar was employed in an identical manner as the first type, to bind masonry members, seal the joints between them, and compensate for surface defects of particular elements [*Fig. 3-5*]. Thus, its thickness ranges from several millimeters to a few centimeters. Because it was applied to the joints between particular masonry members, but not always to their faces, it can be observed chiefly on the perimeter of the ashlar faces [*Fig. 3-6*]; only the very rough and irregular ashlars and stones have it also on their faces. In several instances, evidence of keying of the mortar is noted; this procedure is necessary to improve adhesion of the plaster. Judging by the appearance of the keying, it was done when the mortar had already set [*Fig. 3-7* top]. Fragments of pottery



Fig. 3-5. Type 2 mortar spread over the joints of the wall separating the northern aisle from the nave of the basilica

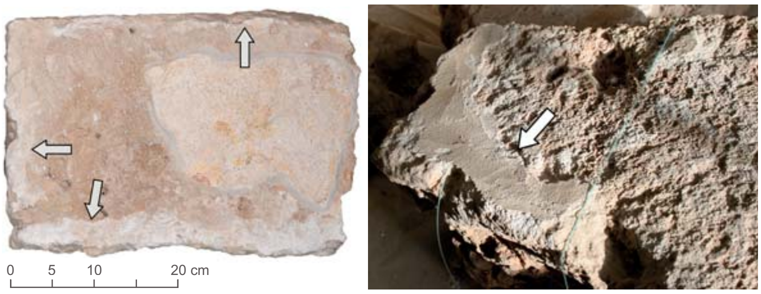


Fig. 3-6. Type 2 mortar: left, remains on the perimeter of *Cat. 176b*; note that the mortar does not coat the center of the ashlar face; right, remains of mortar on ashlar *Cat. 284*; note the marks left by a trowel or a similar tool used to spread the mortar over the joints; view in raking light

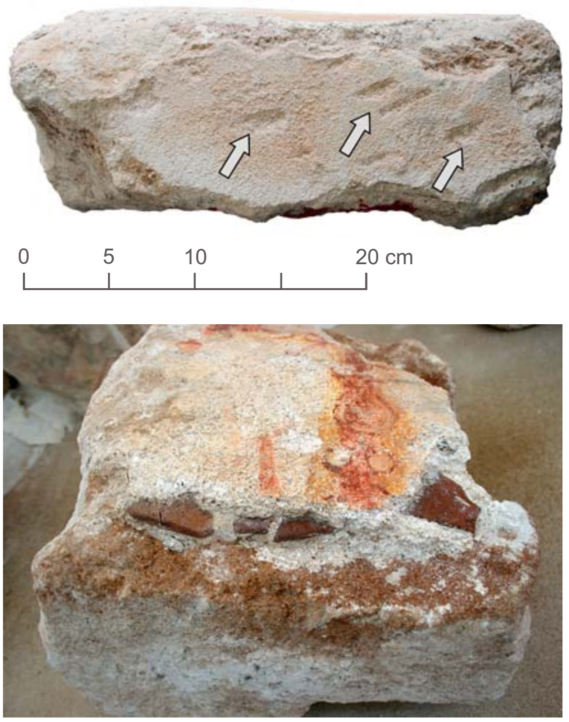


Fig. 3-7. Type 2 mortar: top, evidence of keying of the mortar before the application of plaster visible on the side of ashlar *Cat. 151*; bottom, potsherds pressed into the mortar; ashlar *Cat. 42* has a rough, irregular surface, hence the application of a thick levelling layer of mortar with potsherds

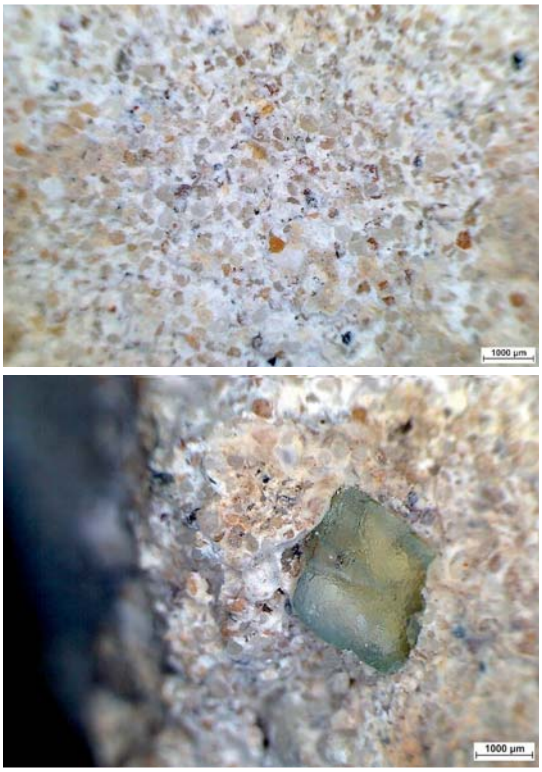


Fig. 3-8. Microphotographs of Type 2 mortar: top, *Cat. 70* – note the even distribution, tight arrangement and uniform sizes of aggregate grains; bottom, *Cat. 152* – piece of glass embedded in the mortar

sherds are at times incorporated in the thick parts of the render [*Fig. 3-7* bottom].[8] Also, small fragments of worn-out glass are present occasionally [*Fig. 3-8* bottom].

Microchemical and petrographic analyses of Type 2 mortar were performed on three samples from the residential district (Jy007, Jy009, Jy011) and two from the basilica (Jy013, Jy015). The composition and component ratios in each of the samples are as indicated in the table [*Table 3-3*]. Samples Jy007, Jy011, Jy013, and Jy015, despite showing slight differences in the proportions of constituents, exhibit a number of common features. They all contain micrite binder which participates in no less than 60% of the volume, generally constituting about 70–80% [*Fig. 3-9*]. Furthermore, microchemical tests indicated a gypsum content in some mortars. Quartz is the dominant type of aggregate, constituting 10–25% of the sample volume. Quartz grains are sub-rounded and angular. Crushed limestone takes up to 10% of the composition, while iron mineral compounds constitute 1–5% of the filler. The amount of bioclasts and different impurities does not exceed 2% of the volume.

Table 3-3. Type 2 mortar: composition and component ratios (dominant type of aggregate in bold)

Sample Cat.	Binder content Type	Quartz Grain size	Crushed limestone Grain size	Iron compounds Grain size	Bioclasts Grain size	Other (including charcoal)
Jy007 ***Cat. 62***	~70% micrite, gypsum	**~15%** 0.2–0.4 mm	~5–7% 0.2–0.4 mm	~2–5% ~0.2 mm	~1–2% 0.2–0.4 mm	<1%
Jy009 ***Cat. 226***	~80% micrite, gypsum (trace)	~2–5%b 0.5–0.65 mm	~5% 0.4–1.2 mm	~1% ~0.2 mm	**~10%** 0.3–0.7 mm	–
Jy011 ***Cat. 169a***	~60% micrite	**~25%** 0.2–0.3 mm	~10% 0.2–0.4 mm	~2–5% ~0.2 mm	–	~1%
Jy013 ***Cat. 246***	~80–85% micrite, gypsum	**~10%** 0.1–0.4 mm	~2–5% 0.1–0.3 mm	~2–5% ~0.1–0.3 mm	–	<1%
Jy015 ***Cat. 252***	~65–70% micrite, gypsum	**~20–25%** 0.2–0.4 mm	~2–5% 0.2–0.4 mm	~2–5% ~0.1–0.2 mm	~1% ~0.2–0.4 mm	
Average	~73%	**~14.5%**	~5%	3%		

A distinctive feature of all four samples is a good selection of aggregates; the size of the grains ranges from 0.1 mm to 0.4 mm, indicating that the fillers were sifted. However, the mortar seems to be unevenly mixed; there are areas of high concentration of aggregates and areas where binder predominates.

Sample Jy009 from the residential district is somewhat different. It contains nearly the same raw materials but the ratio is different: a trace amount of gypsum, a prevalence of bioclasts (~10%), and a nominal presence of quartz (2–5%) [*Fig. 3-10*].

[8] Fragments of pottery were found in all of the construction renders used in the residential district. Urszula Wicenciak identified and dated some of these fragments on the basis of diagnostic elements or fabric (personal communication). The vast majority of identified fragments belonged to amphorae ranging in date from the late 3rd century BCE to the early 7th century CE, with the majority coming from the 3rd–4th centuries CE.

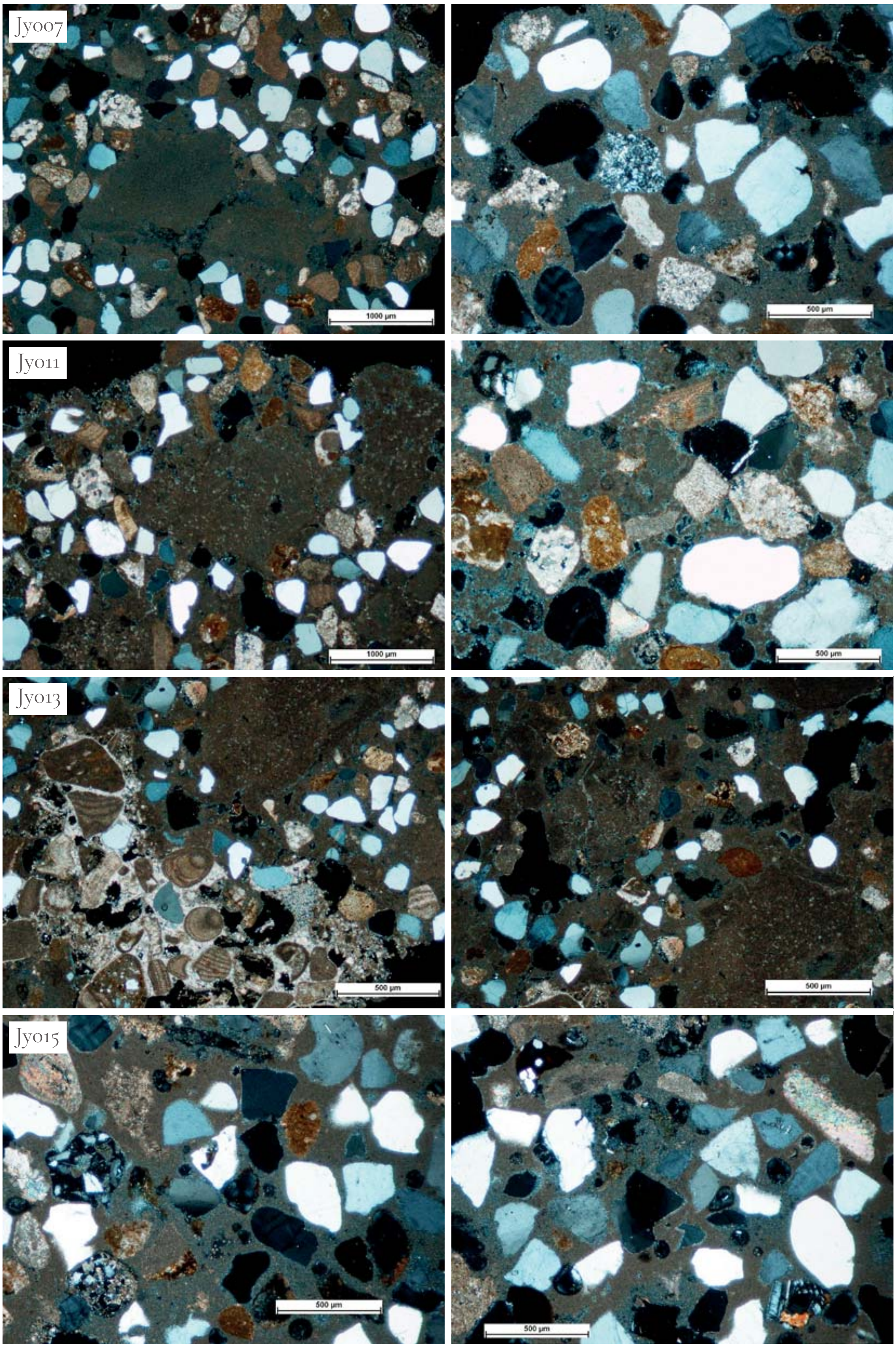


Fig. 3-9. Petrographic thin sections of samples of Type 2 mortar, showing grains of quartz, crushed limestone, iron compounds, and bioclasts; transmitted light, crossed polarizers. Note the uniformity of filler grain size

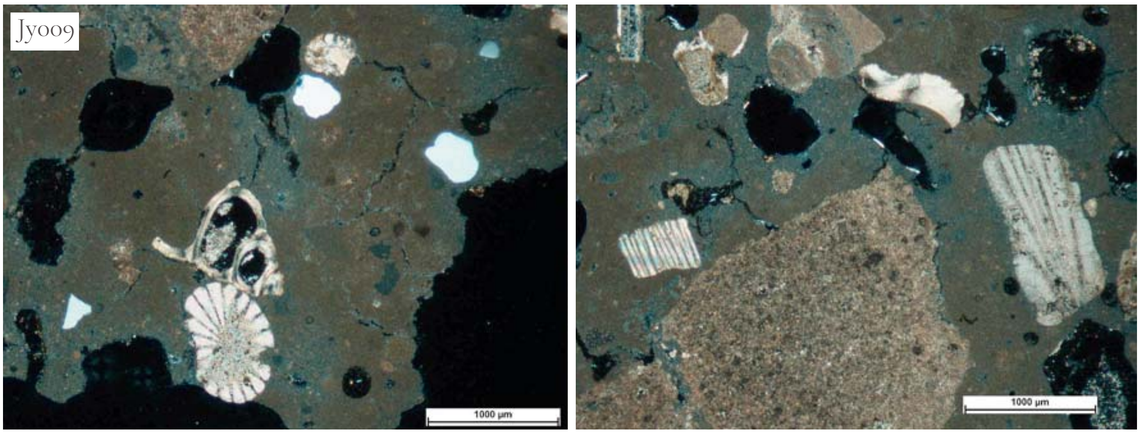


Fig. 3-10. Petrographic thin section of sample Jy009 showing fragments of shells and a nominal presence of quartz and crushed limestone; transmitted light, crossed polarizers

There are two possible explanations of the differences between this sample and the two other samples from the residential district (Jy007, Jy011). First, the actual context of the sampled ashlars is not known exactly, while it is only to be expected that mortars coming from different buildings or phases of construction within the residential district should show differences in morphology. Hundreds of samples collected both *in situ* and from individual ashlars would have to be analyzed and meticulously studied in order to establish the precise compositions of mortars used for particular buildings or parts of the masonry. Second, even within one building constructed entirely in one phase, certain variations in the morphology of mortars is to be anticipated due to human inconsistency. Making mortars is rarely a precise process, and ancient workers rather did not use measuring jugs with scales. Furthermore, particular batches of raw materials (lime and mineral fillers) could have slightly different properties. Therefore, one should allow a margin for some fluctuation of the share of particular components of the mortars.

3.5 Plaster composition

The plaster, which acted as a direct substrate for the paintings, was generally applied directly to the masonry [*Fig. 3-11* top]. Only the perimeters of the ashlars, as well as irregular surfaces of rough or undressed stones, show a preparatory mortar (Type 1 or 2) under the plaster [*Fig. 3-11* center and bottom].

The plaster contains medium-coarse filler consisting chiefly of bioclasts visible to the naked eye [*Fig. 3-12*]. The thickness of the plaster ranges from 5 mm to 15 mm, although the average is about 8 mm. The surface finish is generally smooth, with no evidence of tool-marks or visible joints between particular portions of the render. Grains of aggregates can be seen on the plaster surface but they do not break its smoothness.

Microchemical and petrographic analyses of the plaster were performed on three samples from the residential district (Jy006, Jy008, Jy010) and two from the basilica (Jy012, Jy014). They were collected from the same ashlars as samples of Type 2 mortar. All were characterized by a very high binder content, between 70% and 85% of their volume. In all cases, the principal type of binder

Table. 3-4. Plaster composition and component ratios (dominant type of aggregate in bold)

Sample Cat.	Binder content Type	Bioclasts Grain size	Crushed limestone Grain size	Quartz Grain size	Iron compounds Grain size	Other
Jy006 ***Cat. 62***	~70% micrite	**~20%** 0.25–1.2 mm	~5% 0.3–0.5 mm	~2–5% 0.3–0.5 mm	–	–
Jy008 ***Cat. 226***	~85% micrite	~5% 0.6–0.8 mm	**~5–7%** 0.3–0.5 mm	~2% 0.4–0.7 mm	~1% 0.3–0.5 mm	<1%
Jy010 ***Cat. 169a***	~85% micrite, gypsum	**~10%** 0.5–1.2 mm	~2–5% 0.1–0.2 mm	~1–2% 0.2–0.6 mm	~1% 0.4–0.5 mm	<1%
Jy012 ***Cat. 246***	~70% micrite, gypsum	**~15%** 0.2–0.5 mm	~5% 0.2–1.2 mm	~3% 0.2–0.3 mm	~2% 0.3–0.5 mm	<1%
Jy014 ***Cat. 252***	~80% micrite, gypsum	**~15%** 0.3–0.8 mm	~1% 0.2–0.4 mm	~1% 0.15–0.2 mm	~2% 0.5–0.7 mm	~1–2% 0.5–0.7 mm
Average	~78%	~13%	~4%	~2%	~1%	

Table 3-5. Three-layered substrate (*Cat. 214*): composition and component ratios (dominant type of aggregate in bold)

Sample type Number	Binder content Type	Bioclasts Grain size	Crushed limestone Grain size	Quartz Grain size	Iron compounds Grain size	Other
Plaster Jy016	70% micrite, gypsum	**20%** 0.5–1 mm	2–5% up to 0.5 mm	~5% 0.3–0.5 mm	~1% ~0.2 mm	~1%
Intermediate layer Jy017	70% micrite, gypsum	**20%** up to 2 mm	5–7% 0.5–0.7 mm	~2% 0.3–0.4 mm	~1% 0.4–0.6 mm	~1%
Preparatory mortar Jy018	70% micrite, gypsum	1–2% 0.3–0.5 mm	5–7% 0.3–0.5 mm	**15%** 0.3–0.4 mm	5–7% 0.1–0.3 mm	

is calcium carbonate, although samples from the basilica (Jy012, Jy014) and one sample from the residential district (Jy010) also contain some gypsum [*Table 3-4*].[9]

Similarly as in the case of Type 2 preparatory mortar, plaster samples from the basilica and two samples from the residential district (Jy006, Jy010) demonstrate a very similar composition. Bioclasts are the principal type of aggregate (10–20%), followed by crushed limestone (1–5%), quartz (1–5%), and iron compounds (1–2%). Bioclasts come in various shapes, while the particles of crushed limestone and grains of quartz are sub-rounded and angular [*Fig. 3-13*]. Unlike both types of preparatory mortars, the plaster displays a poor level of selection of aggregates, with grain sizes ranging from 0.1 mm to 1.2 mm and occasional inclusions measuring even a few millimeters. This indicates that the aggregates were not sifted before use.

Again, one sample (Jy008) from the residential district exhibits different ratios of the aggregates. This sample corresponds to sample Jy009 of Type 2 mortar, in which the amounts of

[9] Analyses of salt content in samples of plaster coming from the basilica show a sulfates content of about 2.5% (by weight). See below, *§ 4.4*, *Tables 4-2*, *4-3*.

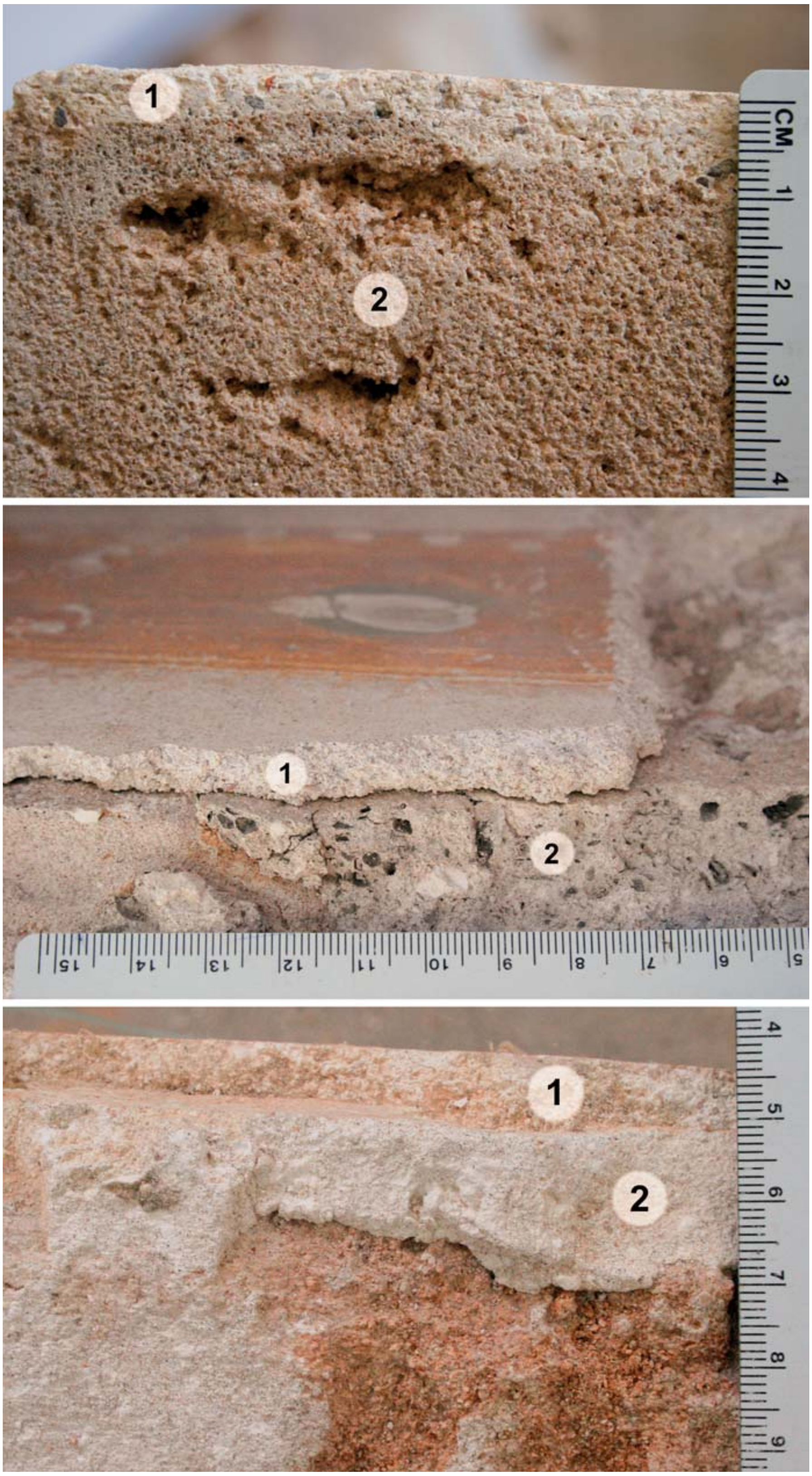


Fig. 3-11. Application of plaster (1): top, directly on the stone (2) (*Cat. 177*); center, on top of Type 1 mortar (2) (*Cat. 37b*); bottom, on top of Type 2 mortar (2) (*Cat. 110b*)



Fig. 3-12. Microphotograph of plaster (*Cat. 70*)

particular types of filler were also different from that in the other four samples. The prevalent type of filler in sample Jy008 is crushed limestone, followed by bioclasts [*Fig. 3-15*]. Quartz and iron compounds can be considered as accessory ingredients (2 and 1%, respectively). The aggregates used for the preparation of this plaster seem to be relatively uniform in size, because their grains fit in the 0.3–0.8 mm range.

In eight fragments of wall paintings, a three-layer substrate was observed (*Cat. 12*, *27*, *28*, *57*, *69*, *121*, *163*, *214*). Samples of each of the layers from *Cat. 214* were analyzed [*Table 3-5*].

The results show that the composition of the lowermost layer (Jy018) corresponds to the composition of Type 2 preparatory mortar described above (Jy007, Jy011, Jy013, Jy015). This mortar consists of calcium carbonate binder with some addition of gypsum; quartz serves as the principal type of aggregate, followed by crushed limestone and iron compounds [*Fig. 3-14* bottom]. Bioclasts are an accessory element. The plaster layer (Jy016) and the intermediate layer of mortar (Jy017) exhibit very similar composition corresponding to the composition of four samples of plaster described above (Jy006, Jy010, Jy012, Jy014) [*Fig. 3-14*]. These results suggest that the three layers of substrates, which can be observed in several fragments of wall paintings, may be related to corrections made in the process of applying the renders. For example, an additional layer of plaster could have been applied to a rendered surface that was visibly uneven, or had contracted and cracked during drying, or suffered some other damage during the work.

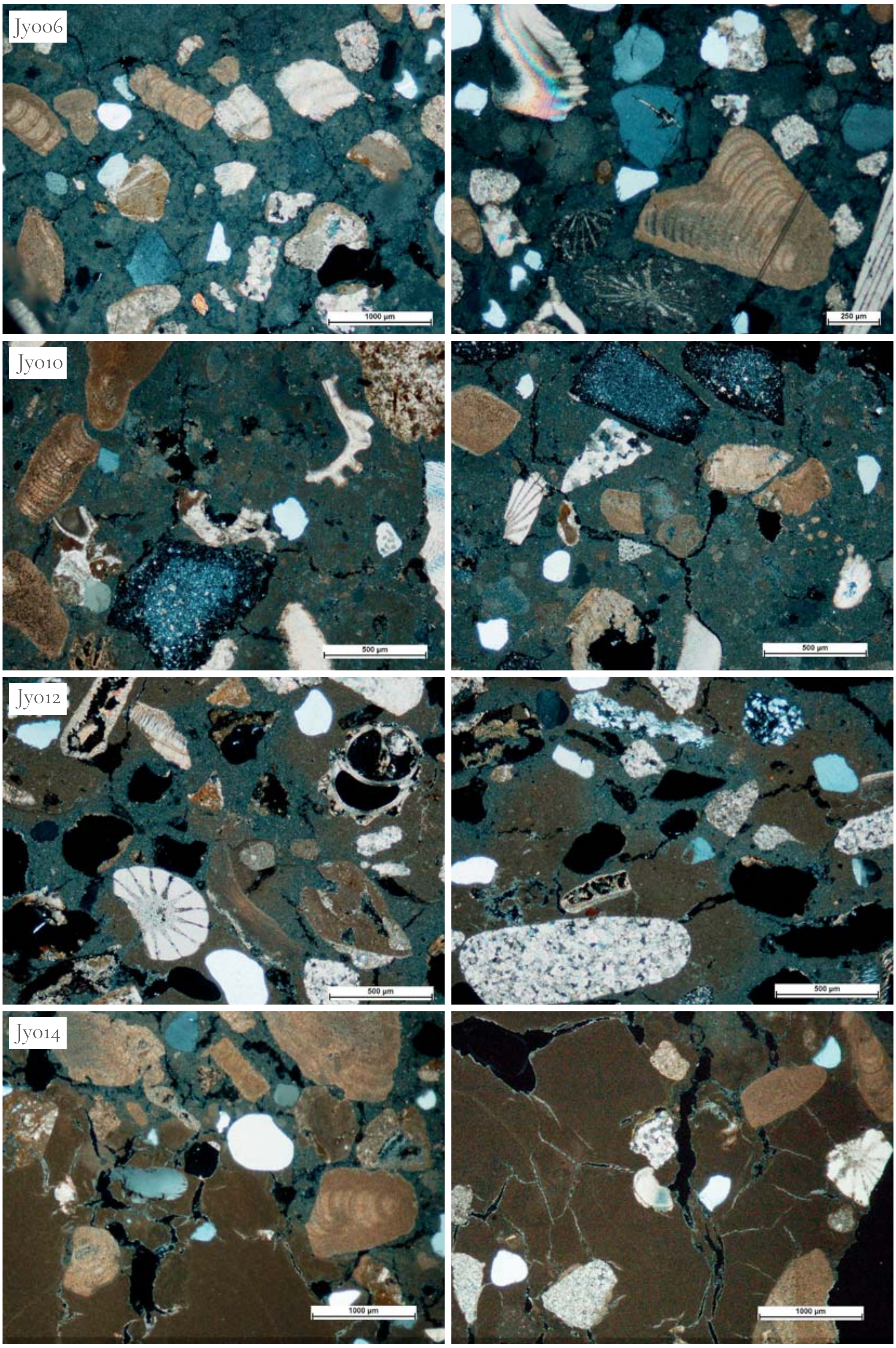
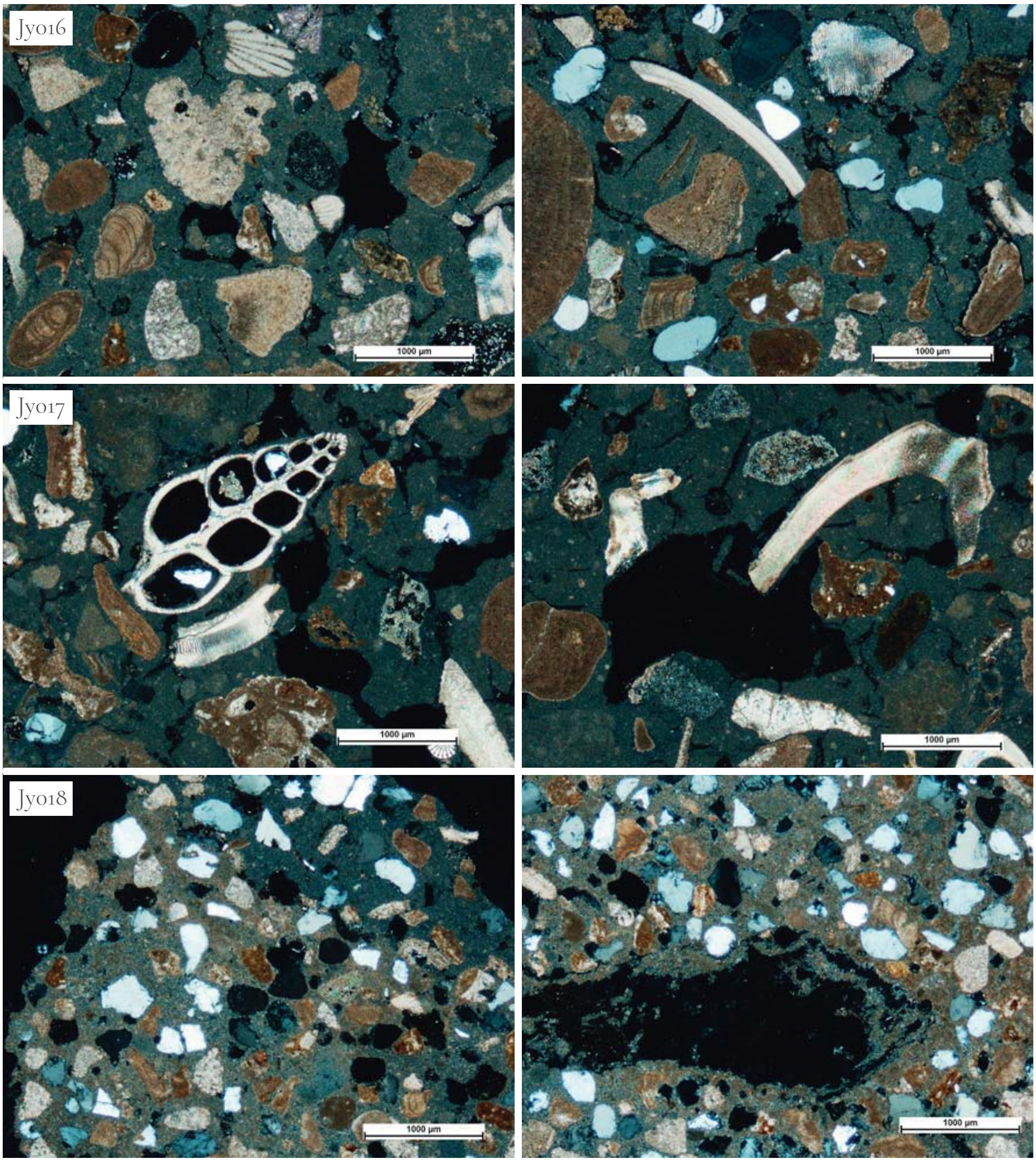


Fig. 3-13. Petrographic thin sections of samples of plaster, showing numerous bioclasts, as well as accessory presences of quartz, crushed limestone, and iron compounds; transmitted light, crossed polarizers. Note the varying size of aggregates



Figs 3-14. Petrographic thin sections of each layer of a three-layered substrate; transmitted light, crossed polarizers. Samples Jy016 and Jy017 display contents corresponding to plaster samples Jy006, Jy010, Jy012 and Jy014, the principal kind of aggregate being bioclasts, followed by quartz, crushed limestone, and iron compounds. Sample Jy018 (the lowermost pair) displays characteristics of Type 2 mortar, with quartz being the principal type of aggregate, followed by crushed limestone and iron compounds, and an accessory presence of bioclasts. Note the good selection of aggregates in sample Jy018 in comparison to samples Jy016 and Jy017

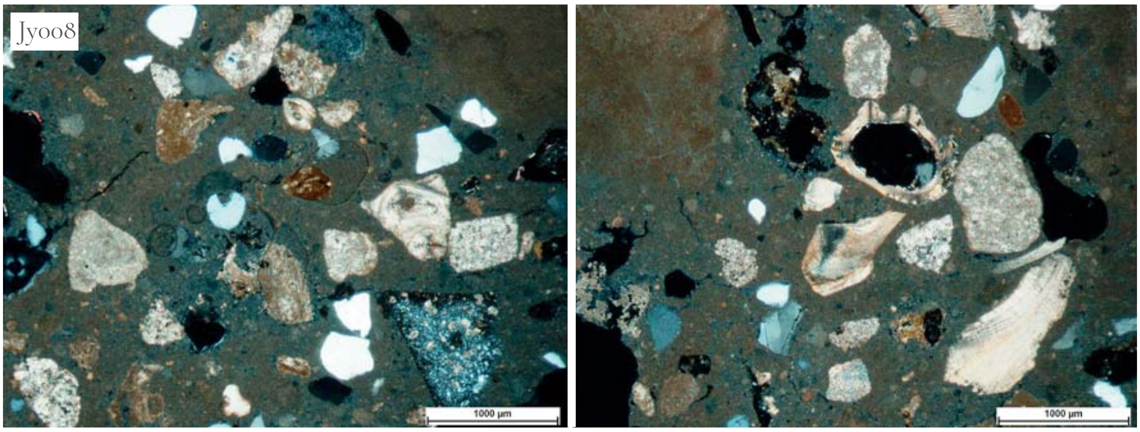


Fig. 3-15. Petrographic thin section of sample Jy008 showing fragments of crushed limestone, bioclasts, and a nominal presence of quartz and iron compounds; transmitted light, crossed polarizers

3.6 Raw materials for mortar and plaster preparation

3.6.1 Binders

All mortars and plasters at Porphyreon were made using lime as a binder, although microchemical tests also indicated the presence of gypsum.[10] It should be said that lime and gypsum constituted the two primary types of mineral binder used in antiquity (Malacrino 2010: 61–64).

Gypsum is produced by heating gypsum rock or alabaster ($CaSO_4{\cdot}2H_2O$) to a temperature of 150–400°C. The product of the process is a hemihydrate ($CaSO_4{\cdot}0.5H_2O$), which, when mixed with water, rehydrates into gypsum ($CaSO_4{\cdot}2H_2O$). This reaction is fast, shortening the working time for gypsum-based plaster (about 15–30 minutes). When set, gypsum is susceptible to mechanical wear, easily absorbs water, and swells and softens, which limits its application on architectural surfaces to interiors and dry climate conditions. The earliest examples of the application of gypsum-based mortars come from the Pre-Pottery Neolithic Near East, where they were used to make floors (Kingery, Vandiver, and Prickett 1988: 220; Rehhoff et al. 1990: 79).

The use of gypsum-based mortars dropped significantly after the effects of heating limestone were discovered.[11] This, however, required a developed pyrotechnology that maintained temperatures of 800–900°C in a lime kiln for at least two days (Kingery, Vandiver, and Prickett 1988: 221). Heating causes calcium carbonate ($CaCO_3$), the primary component of limestone rocks and marble, to be calcinated, turning it into calcium oxide, commonly called quicklime (CaO). It is a highly reactive product which, when mixed with water, releases heat and forms calcium hydroxide ($Ca(OH)_2$), known as slaked lime.

[10] Also see *§ 4.4* for the results of a salts content analysis of samples Jy043 and Jy044.

[11] It is not known when this technology was first developed. It is likely that the effect was discovered by accident, independently a number of times, across the ancient world before the process was fully understood, and the technology formulated and disseminated. Early use of lime-based plaster is attested in Aegean Bronze Age wall paintings (Jones and Photos-Jones 2005). The first textual record dates to the 4th century BCE and is provided by the Greek philosopher Theophrastus (*On Stones*; see Malacrino 2010: 61).

Slaked lime is a thick paste characterized by the capacity to bind various types of material. The longer quicklime is slaked in water, the more complete the hydration and the better the final product. Slaked lime is then mixed with mineral aggregates, and sometimes also with other kinds of admixtures, to produce mortar. During the setting process, calcium hydroxide reacts with carbon dioxide from the atmosphere and forms insoluble calcium carbonate, giving the mortar the original chemical composition of limestone (Rehhoff et al. 1990: 79). The setting time depends on the mortar components, temperature, and humidity of the environment (and in modern times also on air pollution). In any case, it is significantly longer than for gypsum, giving enough time for the building process, whether construction or plastering.

The very good mechanical properties of lime-based mortars, which are modifiable and capable of being improved by appropriate additives (e.g., pozzolana), made them a material of choice for construction, preparation of wall renders, and substrates of mosaic pavements and wall paintings in antiquity (Davey and Ling 1982: 52–53; Ling 1991: 199). Meanwhile, gypsum continued to be used chiefly for the creation of moldings and stuccoes, as well as whitewash (Malacrino 2010: 64).

In the East, archaeometric studies have revealed lime in the wall painting substrates from the Herodian palaces at Masada and Jericho (Rozenberg 1997: 63; Porat and Ilani 1998: 81), the Roman temples at Chhim (Burdajewicz 2021) and Omrit (Uvarov, Popov, and Rozenberg 2015: 781, Table 1), and the Hellenistic-Roman tombs and a Paphian villa in Cyprus (Kakoulli, Fischer, and Michaelides 2010: 98; Vieillescazes, Joliot, and Ménager 2016: 145–151). Several Late Antique wall paintings from the Levant were executed on lime-based substrates. Calcium carbonate binder was detected in plasters from the Grotto of Annunciation in Nazareth (Capasso Carola 1969), wall paintings from Caesarea Maritima (Linn 1996: 49–53), the churches at Sa'adon (Burdajewicz 2018) and Chhim (Burdajewicz 2021), and from various buildings at Umm el-Jimal (Dunn and Rapp 2004: 153, 157; Al-Bashaireh 2019). All the analyzed plasters from the North-West Church at Hippos-Sussita turned out to be lime-based, except for one sample which was composed solely of gypsum (Michniewicz and Michalska-Nawrocka 2005: 91). Calcium carbonate was also ascertained in the uppermost substrate layer of the Umayyad wall paintings at Qusayr ʻAmra (Bianchin et al. 2007: 290).

Interestingly, gypsum, which has been detected in mortars and plasters at Porphyreon, has also been found in a number of Late Antique renders from other sites. In the Southern Church at Nitzana/Nessana lime was used in conjunction with certain amounts of gypsum (Freidin and Meir 2005: 20, 22). A plaster sample coming from the wall of a tomb in Horvat Karkur was identified as gypsum-rich (Figueras, Jenkins et al. 2004: 75). In the Jabal Harun church, both gypsum and lime plasters were employed: the former in the area of the apse, the latter elsewhere in the church (Danielli 2008: 411). The use of gypsum and gypsum-lime mortars was recorded in two Umayyad monuments: the palace on the citadel of Amman and the castle of Qasr al-Kharrana (Almagro 1995: 272).

There are two possible reasons for the relatively rare yet continued use of gypsum for mortars and plasters. First, one cannot be short on fuel when producing lime. The five just-listed sites where gypsum was found in the renders are located in desert or semi-desert arid environments where it might have been difficult to provide enough fuel to reach and maintain the required temperature in a limekiln. An alternative for locally produced lime would be an imported product; this, however, would generate transportation costs. Meanwhile, gypsum rock requires much lower

heating temperatures than limestone (even as low as 128°C; Malacrino 2010: 64), hence, less fuel is used. Costs could be cut by using gypsum by itself or by corrupting the presumably more expensive lime. Nevertheless, for Porphyreon and the entire central Phoenician coast lying at the foot of the green Chouf Mountains fuel would not have been a likely issue of concern.

Next, the use of gypsum is sometimes explained by the eastern influence of Parthian and Sasanian architecture, which was heavily reliant on gypsum, possibly also because of fuel shortages (Almagro 1995: 273). While this explanation is plausible for the Umayyad palace in Amman and the castle at Qasr al-Kharrana, it does not seem likely at Porphyreon in view of the site's geographical setting and the chronology of the buildings there.

Last but not least, the presence of gypsum, both on the surface and in the structure of lime-based renders, could be due to sulphation (Bouchelaghem 2010), which occurs when calcium carbonate reacts with sulfur dioxide (SO_2) from the atmosphere in the presence of water. The outcome of this reaction is precipitation of gypsum, a common cause of deterioration processes involving cracking and powdering (Barilaro et al. 2005). A phenomenon of this kind does not seem improbable in Porphyreon. Secondary formation of gypsum caused by sulfur dioxide might have occurred in modern times as a consequence of the construction of power and cement plants at Jiyeh, Zahrani, and Sibline, which have been responsible for severe environmental pollution in the coastal zone of Lebanon.

Nevertheless, several more samples would have to be analyzed to determine the average share of gypsum in the renders and to investigate its source (intentional admixture, contamination, or the result of sulphation).

3.6.2 Aggregates

Four kinds of aggregates were primary in the mortars and plasters from Porphyreon: bioclasts (fragments of shells and skeletal remains of marine organisms), quartz, crushed limestone, and iron-oxide compounds. Each type of render (Type 1 and 2 mortar, and plaster) displayed different amounts of each of these constituents, as well as varying grain sizes and uniformity.

The aggregates in the plaster correspond to the composition of beach sand from the Lebanese coast, which consists chiefly of bioclasts, quartz, and minerals carried by local rivers that empty into the sea. The average share of each kind of aggregate in the analyzed plaster samples was compared with the results of a study of beach sand from Sidon (Ownby and Griffiths 2009: 60–62) [*Fig. 3-16*]. The study comprised, among others, a sample of sand from a Middle Bronze IIA deposit and two samples from the modern beach. The aggregates from Porphyreon resemble the composition of the MB IIA sample, the difference being the crushed limestone in samples from Porphyreon instead of the chert present in the Sidonian sample. The two modern samples additionally contained some amounts of heavy minerals, such as pyroxene.

The study also demonstrated no marked change of the composition of beach sand within a range of one kilometer from the tested location, but significant variations within a 10 km radius (Ownby and Griffiths 2009: 62, 64). These differences are due, among others, to minerals from the mountains carried down by rivers, and are dependent on the mineral deposits the river passes through. On the coastal side of the Mount Lebanon range, one expects to find grains of limestone, chalk, chert, and chalcedony (Ownby and Griffiths 2009: 59). Since currents in the

Mediterranean flow northward, the composition of beach sand at Porphyreon may be influenced by rock material carried by the Nahr Awwali, which flows into the sea about 9 km south of the site. Comparative analyses of local sand from the area of Porphyreon and Nahr Awwali could confirm this idea. That the particles of limestone and grains of quartz were not carried over any large distance is indicated by their sub-rounded, sub-angular, and angular shape. A similar level of grain angularity was also observed in beach sand from Sidon.

It is possible that the sand used for the preparation of the plaster was washed,[12] but it is dubious that it was sifted. This is demonstrated by the poor selection (varying size) of its grains [see *Fig. 3-13*].

The aggregates used for Type 1 mortar are basically the same as in the case of the plaster but the proportions are markedly different. The dominance of quartz (~20% of mortar volume) and crushed limestone (~13%) over bioclasts (~7%) can be explained in two ways. First, the aggregates could have been obtained directly from a river, where material transported from the mountains would likely prevail over deposits of marine origin. Alternatively, the sand used for the preparation of this mortar could have been obtained from the same or a nearby location as the sand for the plasters, but the amount of bioclasts could have been reduced through sifting. Aggregates found in this mortar appear uniform in size and do not exceed 1 mm, whereas plaster is characterized by aggregates of diverse size, among which bioclasts are the largest (reaching up to 1.2 mm). Sifting would have eliminated many large fragments of bioclasts, presumably changing the share of particular kinds of aggregates.

Preparation of aggregates for Type 2 mortar doubtlessly involved sifting, the mesh size of the sieves passing a very narrow range of material, 0.2–0.4 mm in size. Quartz is again the prevalent

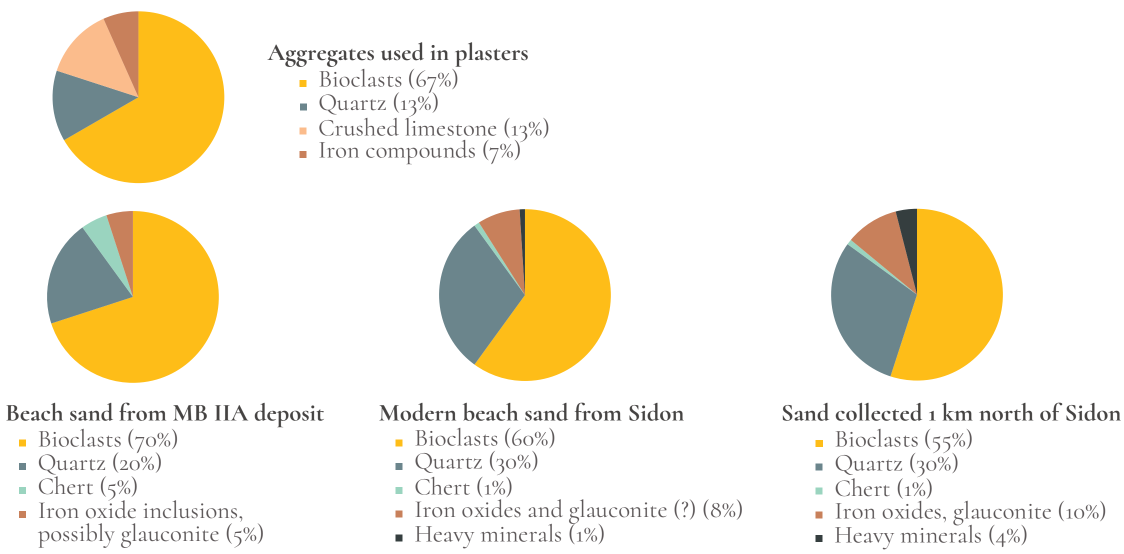


Fig. 3-16. Average participation of various aggregates in plasters from Porphyreon (top) juxtaposed with the contents of beach sand from Sidon according to Ownby and Griffiths (2009)

[12] The authors of the study on beach sand from Sidon suspected that sand from the MB IIA deposit might have been washed because it does not contain certain heavy impurities; the same was observed in samples from Porphyreon.

aggregate (10–25%),[13] followed by crushed limestone (2–10%), iron-oxide compounds (2–5%), and the presence of bioclasts (1–2%) as an accessory element. Same as in the case of Type 1 mortar, sifting would have likely eliminated bioclasts of diverse shape and size.

Obviously, the preparation of mortars and plaster at Porphyreon was reliant on locally available aggregates (i.e., beach sand, with a composition altered by sifting), a cost-related conclusion only to be expected.

One should think that mortars and plasters executed at Caesarea Maritima would provide a useful comparative reference for Porphyreon as far as the study of aggregates is concerned due to a similar coastal location and geological features. However, analyses of renders from various structures dating from the 4th to the 7th centuries have revealed very limited amounts and types of admixtures (Linn 1996). For example, plasters from the Caesarean bathhouse did not contain any mineral fillers, just particles of black ash; small amounts of quartz were attested in samples from the painting of the three orans in Vault 11 of the warehouse complex [see below, *Fig. 5-31*], while plasters from the representation of Christ and the Apostles in Vault 9 of the same complex and fragments found in Area KK did not contain any aggregate at all (Linn 1996: 49–53). A mixture of quartz and crushed ceramics was found in plasters from the Late Antique nymphaeum. Interestingly, plasters from Roman-period buildings at Caesarea betray more similarities with renders from Porphyreon, because they contain varying ratios of quartz, bioclasts, calcite, crushed *ramleh*, and feldspar (Linn 1996: 36–48).

Somewhat comparable results were obtained in an archaeometric study of substrate layers of wall paintings from the church at Chhim (Burdajewicz 2021). The plasters contained 68%–73% calcium carbonate binder and 32–27% filler composed of crushed bioclastic limestone and quartz. The filler was likely obtained from local stream beds.

Other renders from Late Antique sites analyzed thus far can barely be considered as relevant comparative material for the aggregates from Porphyreon, because the selection of the aggregates appears to have been heavily influenced by locally available resources. Bioclastic limestone and crushed ceramics, alongside a variety of accessory ingredients, constitute the aggregates of plasters from the Grotto of the Annunciation in Nazareth (date uncertain; Capasso Carola 1969: 170–172). No mineral filler was found in the majority of analyzed plaster samples from the North-West Church at Hippos-Sussita (mid-6th century–749; Michniewicz and Michalska-Nawrocka 2005: 83, 91). Only one sample contained a complex mix of mineral aggregates, including grits of well-rounded basalt, foraminiferous and massive limestone bits, some quartz grains, flints, bivalve shells, and crystalline limestone, while another sample of a lime-based plaster contained a small admixture of quartz (Michniewicz and Michalska-Nawrocka 2005: 83).

Analyses of plasters from the Jabal Harun church complex demonstrated that the choice of aggregate depended on the type of binder. In lime plasters, well-selected mono-crystalline and poly-crystalline quartz-arenitic aggregates were employed. Moreover, grain sizes of the quartz-arenitic aggregate differed depending on the type of wall render. Preparatory mortars contained fillers of various sizes, while fine and selected aggregates were employed for the final plaster coatings. In gypsum-based plasters, carbonated lime, gypsum granules and recrystallization concretions of gypsum constituted the filler. Additionally, iron and manganese oxides originating

[13] Excluding sample Jy009 which shows a markedly different composition.

from local oxide-rich sandstone were reported in the mixtures (Danielli 2008: 411–412). Gravel, sand, clay, and silt were used in various proportions in the plasters and mortars from the Umm el-Jimal settlement. Apart from sand, the white lime plasters contained crushed terracotta, while crushed scoriaceous rock and burnt plant matter were identified alongside sand and terracotta in the gray lime mortars (Dunn and Rapp 2004: 153, 157).

The results from a church at Sa'adon in the Negev are noteworthy (Burdajewicz 2018). Even though somewhat different, locally available aggregates were used, the preparation standards for the filler in the mortar and plaster are similarly diversified as at Porphyreon. The principal filler in the mortar is quartz (45% of the sample volume) followed by feldspar fragments and a number of accessory ingredients (altogether 4%). All aggregates are of uniform size (0.2–0.3 mm) suggesting sifting before use. Aggregates found in the plaster comprise limestone and gypsum rock fragments (9.5%), and accessory quartz (1.5%). The former come in varying sizes (0.1–1 mm), hence they were not sifted.

3.6.3 Charcoal

Charcoal, detected in Type 1 mortar, is the only inclusion of vegetal origin used for the production of renders at Porphyreon. The presence of charcoal in mineral renders may be considered as accidental if observed in small quantities; it could be associated in such cases with the residue of combustion processes in limekilns (De Luca et al. 2015: 335). However, at Porphyreon, the amount and distribution pattern of chunks of charcoal in Type 1 mortar suggests that it was added deliberately.

Charred vegetal matter has been attested in historical mortars from various periods and parts of the Mediterranean, yet the intention behind its application remains unclear (Stefanidou, Papayianni, and Pachta 2012: 747). Possible explanations are that the addition of charcoal to the mortar could have reduced its weight, protected against dampness, and facilitated "breathing" of the render. It has also been suggested that it could have provided mortars with slight hydraulic properties (Almagro 1995: 273; Al-Bashaireh 2019: 220), and that ash produced in the burning of silica-rich plants could have reacted with the lime (Dunn and Rapp 2004: 154).

Examples of the admixture of charred organic matter to mortars from Late Antique sites in the Levant include the basilica at Chhim, and various buildings in Caesarea Maritima, Jerash/Gerasa, and Umm el-Jimal. At Chhim, charcoal constituted about 9.5% of the volume of one of the preparatory mortars (Burdajewicz 2021). At Caesarea, black ash particles were the only type of "filler" in plasters from the Late Antique bathhouse. Analyses of mortars from mosaic beddings from seven churches in Gerasa revealed that the *rudus* and *nucleus* layers frequently contained burnt organic matter alongside calcium carbonate binder and crushed limestone (Hamarneh and Abu-Jaber 2017: 28–29). Plasters from a large water reservoir in Gerasa generally contained fine particles of burnt matter, except for two samples which contained large pieces of charcoal (Lichtenberger et al. 2015: 116). At Umm el-Jimal, fine particles of charcoal were observed in lime-based mortars used for floor substrates and domes (Dunn and Rapp 2004: 154, 156), as well as in construction mortars and plasters in houses (Al-Bashaireh 2019). With regard to Umayyad monuments, mortar with ash was used for plastering of the inside of the walls of Qusayr 'Amra, as well as for the bedding of the mosaics in the Umayyad palace in Amman (Almagro 1995: 273–274).

Studies have demonstrated that in Greece almost half of the investigated Roman-period wall renders and 56% of the floor beddings contained charcoal (Stefanidou, Papayianni, and Pachta 2012: 741, Table 1). Furthermore, it was commonly applied to structural mortars, for example, in the construction of Galerius' palace at Thessaloniki (3rd century; Stefanidou, Papayianni, and Pachta 2012: 741, Table 1). In all cases, it totaled no more than 1% of the mortar weight.

These examples suggest that inclusion of burnt organic matter in mortars and plasters might have been intended to increase their durability (floors and walls) and impermeability (floors, water reservoirs, and baths), or to reduce weight (domes). Furthermore, Vitruvius recommends placing piles of charred olive or alder wood and charcoal in the foundations of city walls, theaters, and harbors, especially in areas where the ground was soft (*TB*, V, 12.5). Even though he does not mention adding burnt organic matter to the mortars, his recommendations may point to some properties of charcoal which, according to the ancient engineers, made it suitable for the construction of massive structures. Such a concept would be in line with the presence of charcoal in Type 1 mortar used for the construction of the external, load-bearing walls of the basilica at Porphyreon.

3.7 Preparatory marks

Few preparatory marks for laying out designs have been observed in Porphyreon despite the degree of complexity of some of the painted motifs. A "snapped line" technique was employed to score guiding lines for aligning letters of inscriptions. In this method, a piece of string is stretched, pulled back, and released so that it snaps against the surface, leaving a straight line, either incised if the plaster is still fresh, or colored if the string was dipped in paint. It was commonly employed by ancient wall painters to plan out geometric designs or decorations based on vertical, horizontal, or diagonal axes (Barbet and Allag 1972: 985, 1052–1054; Ling 1991: 204; Barbet 2000: 171; see also Bonifacio and Sodo 2002: 143–144). For the wall paintings from Porphyreon, a cord dipped in red paint was used [*Fig. 3-17*]. There is no evidence of imprints left by the string in the plaster surface, which indicates that the plaster was already firm when the paintings were executed.



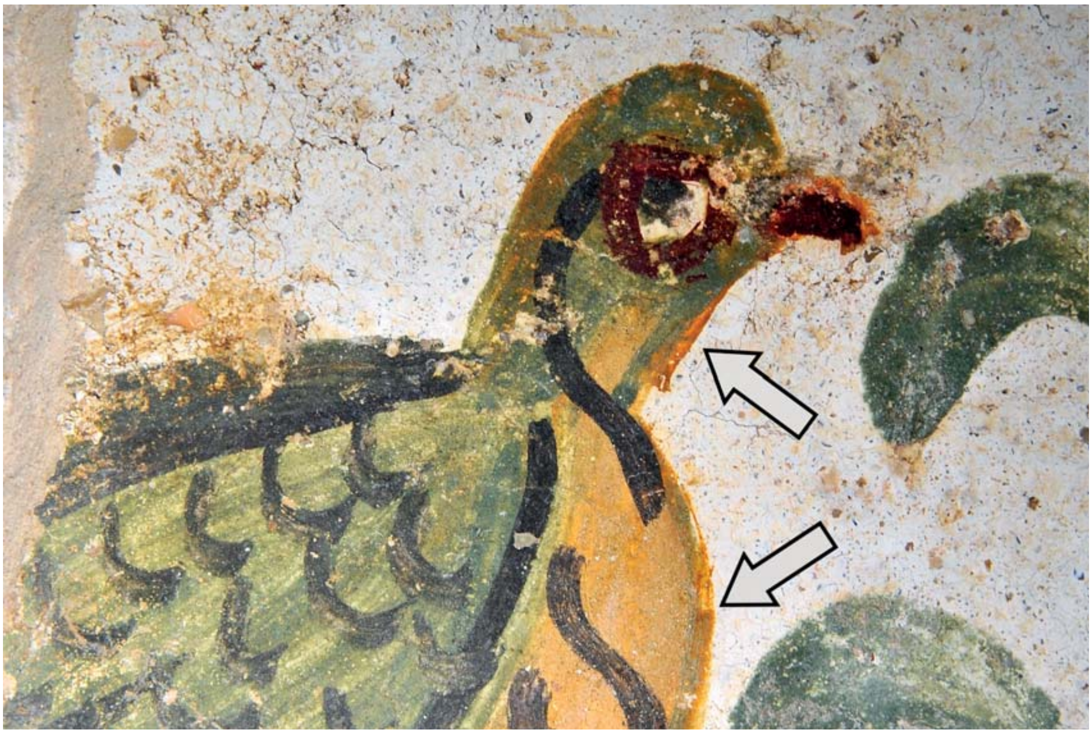
Fig. 3-17. Guiding lines executed with the snapped-line technique: left, above the script on *Cat. 88*; note the splashes of paint made when the string snapped against the surface of the plaster; right, above and below a painted inscription (*Cat. 191*)



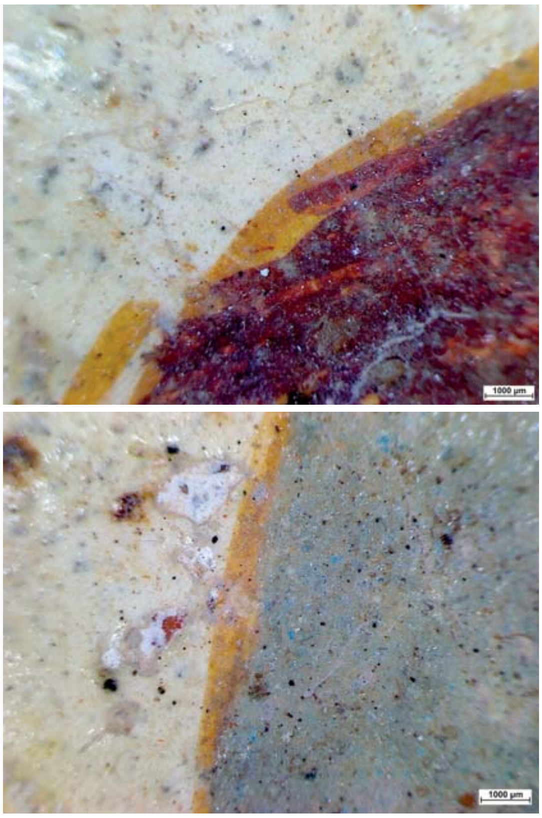
Fig. 3-18. Pit left by the point of a compass (*Cat. 77*), view in raking light

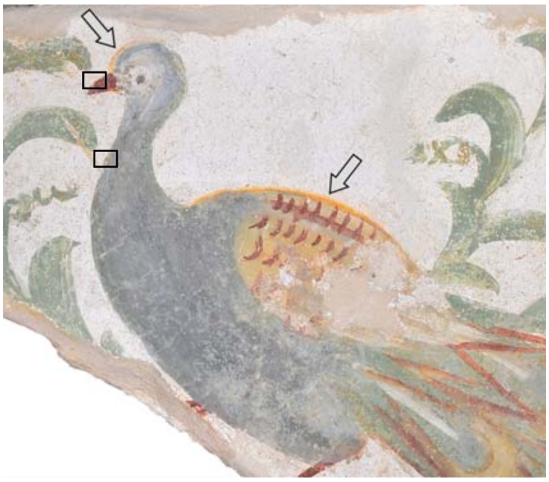
Another type of tool that left its marks on the wall paintings from Porphyreon was a compass, one of the most elementary aids of ancient painters. Its employment is often attested in Roman-period wall paintings featuring round elements, such as imagines clipeatae, geometric patterns, or stylized floral decorations based on a circular module (Barbet and Allag 1972: 1015–1018, 1055–1058; Barbet 2000: 171). Evidence of a compass being used for wall painting in Porphyreon is observed on a round "gemstone" motif, the outlines of which were produced in this way (*Cat. 77*) [*Fig. 3-18*]. In the center of each of the better-preserved gems, one notes a small pit with irregular edges made a compass point. Such pits were also observed in the middle of each of the acanthus scrolls on fragments *Cat. 171a*, *172*, *174a*, and *175a*. Furthermore, the precision and confidence of execution of the concentric rings of medallions surrounding jeweled crosses indicate the use of compasses for their rendering. One would expect to see a small hole left by the point of the tool in the centers of these medallions had any such centers actually been preserved.

The third kind of preparatory mark is an ocher outline appearing around the shape of a peacock (*Cat. 94*) and a partridge (*Cat. 97*) [*Fig. 3-19*]. Microscopic examination of the peacock's bill and neck revealed an ocher color partly covered by paint [*Fig. 3-19* bottom]. This suggests that a monochrome sketch or underpainting was made first in order to lay out the design, and the paint layers were built up on top of it. Roman-period artists commonly employed such a procedure with the difference that a red natural earthen pigment was usually used for this purpose



▲ *Cat. 97*





▲ *Cat. 94*

Fig. 3-19. Preliminary ocher underpainting: top, on the depiction of a partridge (*Cat. 97*); bottom, on the depiction of a peacock (*Cat. 94*); boxes indicate location of microphotographs on left; note that the paint of the red bill and the blue breast is applied on top of the ocher underpainting (the yellow tint of the microphotographs is caused by the presence of old yellowed varnish)

(Barbet and Allag 1972: 985–986; Foerster 1995: 29).[14] These are the only two fragments from Porphyreon to betray the presence of any kind of painted preparatory sketch. None of the cross sections of paint layers that were carried out revealed any painted preparatory marks. Nevertheless, the precision of execution of some of the paintings (e.g., inhabited scrolls on the arch, geometric designs inside the medallions) and the lack of any apparent corrections of the compositions suggest that sketches of some kind could have been made and then obscured by the paint. These preparatory drawings could have been made with charcoal or another kind of dry pigment,[15] but these are very difficult to detect because subsequent painting with a paintbrush would wipe away particles of these pigments.

The neat representations of the peacock (*Cat. 94*), partridges, and inhabited scrolls contrast with some fragments of paintings executed in a rather unconstrained and freehand, perhaps even sloppy manner [see below, *Fig. 3-31*]. One is entitled to think that these parts were done without any preparatory outlines to guide the artist's brush. Coupled with a varying artistic quality of particular fragments of paintings, this inconsistent approach to planning out the designs of wall paintings at Porphyreon argues in favor of the decoration being executed by several (teams of) painters.

3.8 Paint layer

3.8.1 Paint layer buildup and brushwork

Particular fragments of wall paintings from Porphyreon display a varying complexity of paint layer buildup. The explanation is twofold. First, different subjects required different rendering; for example, three to four layers of paint of different colors were necessary to represent the details of a jeweled cross or a peacock's train, whereas a leaf of a generic plant could be executed with a single stroke of a paintbrush dipped in green paint. Second, as already noted, particular depictions vary in terms of their artistic quality, and betray the work of several artists, plausibly with different skills and talents. Having said that, we should keep in mind that a simple paint layer buildup does not necessarily mean poorer artistic skills.

The fragments of wall paintings examined in the Beiteddine Museum were generally executed with opaque paints. This observation takes into consideration that many of the fragments are currently severely abraded. It appears that semi-transparent paints were used primarily to render foliage and vegetal tendrils. The use of overlapping semi-translucent patches of varying tones of green allowed in many cases to create an impression of density and depth of foliage,[16] which may

[14] Such a preparatory sketch is often called *sinopia*. The term originates from Renaissance Italy and derives from the hematite-based pigment mined in the vicinity of the Turkish town of Sinop. In antiquity, any earthen red pigment would have probably served this purpose. The preparatory drawings for floor mosaics were often executed using various colors (see Piovesan, Maritan, and Neguer 2014). For colorful underpainting of the Transfiguration mosaic from Sinai see Zizola 2014: 238.

[15] Charcoal was used to outline the composition of the second phase of wall paintings in the Grotto of the Annunciation at Nazareth (Capasso Carola 1969: 173). Red and black sketches (made with charcoal?) were found underneath wall paintings in the Episcopal basilica at Stobi (Tutkovski 2018: Note 2, Fig. 4).

[16] This semi-transparency may also result from the kind of green pigment. For pigment identification see section below.

be an indication of the painter's skill and artistic sense. Also, some of the plant tendrils, marked with just a few strokes of watery, semi-translucent paint, display an elegant and effortless form [*Fig. 3-20*].

While painting with watery paint would have been cost-efficient, other fragments of wall paintings suggest that the artists working at Porphyreon were not necessarily compelled to use pigments sparingly. Depictions of jeweled crosses, medallions, animals, inhabited scrolls, and geometric designs display substantial, sometimes very thick, paint layers [see *Figs 3-18*, *3-21*, *3-22*]. This thickness is in some cases caused by abundant application of just one or two colors, while at other times it results from the presence of several superimposed layers of paint. The first case is illustrated by some fragments of simple red crosses or painted inscriptions which tend to be rendered with a single yet oftentimes thick layer of red paint. The same manner of painting may also be observed on some of the depictions of leaves [*Fig. 3-23*]. Paint layer buildup consisting of several superimposed layers is observed, for example, on depictions of medallions and on the edges of jeweled crosses that consist of an orange base color, a contour of a different color on top of it, followed by a series of dabs of paint imitating jewels or pearls [*Figs 3-24*, *3-25*, *3-26*].

Microscopic examination of the stratigraphy of three samples of paint layers (Jy019, Jy020, Jy021) allowed their thickness to be estimated [*Fig. 3-27*]. For example, the four layers of paint from sample Jy019 have a total thickness of 72 μm. The buildup of Jy021, consisting of just two layers of paint, was only slightly thinner, measuring 64 μm, whereas a two-layered portion of sample Jy020 reached a thickness of nearly 90 μm. A portion of the same sample, which consisted of four layers, measured 124 μm.

Examination of fragments of wall paintings with more than just one layer of color suggests that they were generally painted "wet-into-wet". This is attested, for example, by contamination of the color of the upper layers of paint with pigments of the base color [*Fig. 3-28* top]. The "wet-into-wet" technique can also be observed in the brushwork, as some of the brushstrokes plowed through the already applied, yet still wet paint. This can be seen on the "gemstone" motif, where the outlines of particular gems wiped away the brushwork of the interior of the gems [see *Fig. 3-18*]. A similar manner of painting can be seen on a fragment where the bottle-green breast of a bird(?) was executed "wet-into-wet" with a relatively thin (0.5–1 cm) rigid brush that left groove-like marks [*Fig. 3-28* bottom].

The lowermost layers of paint of many fragments seem to have been executed using wide brushes, which allowed an even and ample application of the paint. Further details were executed on top of this base color. This painterly technique can be observed, for example, in depictions of jeweled crosses, where the orange base color was applied with the use of a wide brush, while the contours and details were finished with very thick paint applied with smaller paintbrushes [see *Fig. 3-24*]. Examples of such brushwork can be seen on a lamb's pelage and the plumage of a peacock [*Fig. 3-29*].

Fragment *Cat. 81* reveals a unique painting technique, the artist apparently splashing paint deliberately across the depicted item [*Fig. 3-30*]. The effect must have been intended, because the splashes do not appear on the white background. Such splashes may have been meant to imitate marble (see below, *§ 5.3.4*).



▲ *Cat. 152* ▼ *Cat. 97*



Fig. 3-20. Watery, semi-translucent green and ocher paint used to render foliage (*Cat. 152*) and green leaves and tendrils (*Cat. 97*)



▲ *Cat. 170a*

▼ *Cat. 170b*



Fig. 3-21. Build-up of paint: details of inhabited scrolls, view in raking light. Top, yellow background executed with thin paint, on top of which the hound was painted (its hind legs are visible on the right), and the succulent leaves of the scrolls in thick green paint (*Cat. 170a*); bottom, visible thickness and brushwork on the leaves and the red round fruit of the acanthus (*Cat. 170b*)



Fig. 3-22. Detail of pomegranate fruit set among foliage, painted with thick red paint and finished with dark pink opaque highlights on top of foliage painted with semi-translucent paint in various shades of green (*Cat. 154*)



▲ *Cat. 45c* ▲ *Cat. 13*

Fig. 3-23. Use of thick paint in one layer: *Cat. 45c* – leaves on the outer ring surrounding a medallion with a jeweled cross made with thick green paint applied with single brushstrokes; *Cat. 13* – thick, well-preserved red paint used to render a cross



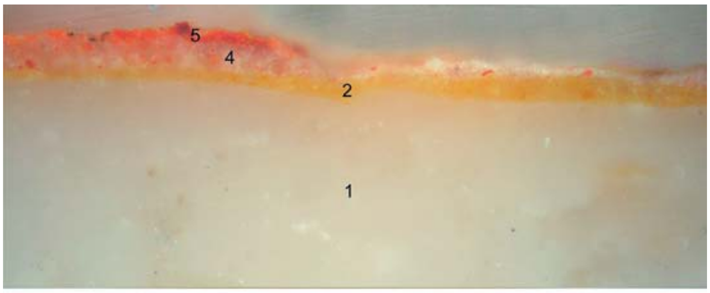
Fig. 3-24. Details executed in thick paint over underpaint: *Cat. 30a* – jeweled cross underpainted with dark yellow, with various details executed in thick paint on top of that

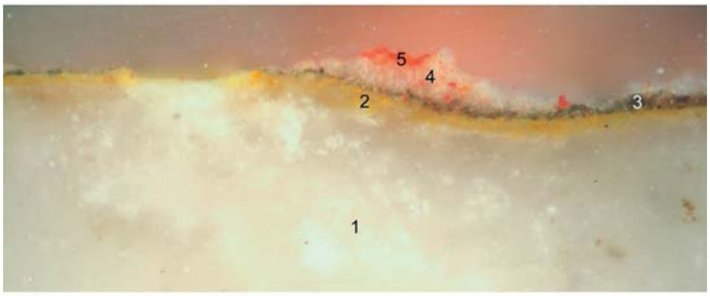


Fig. 3-25. Detail of a wreath around a jeweled cross (*Cat. 45b*): note the coarse grains of white pigment added to the yellow of the fruit. The fruit, lily-like white flowers, and green leaves were executed on top of greenish-gray base color (underpaint)



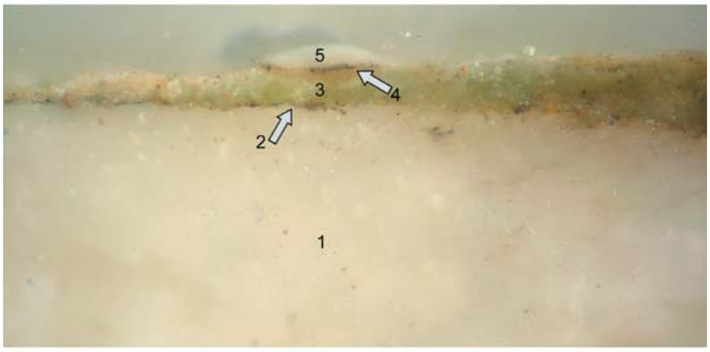
Fig. 3-26. Detail of a wreath around a jeweled cross (*Cat. 45c*) viewed in diffused and raking light (top and bottom, respectively). Note the thickness and brushstrokes of the fruit, as well as impastos marking the white details of the wreath





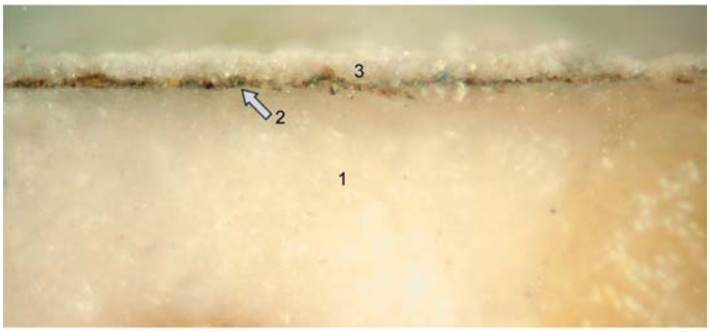
Jy019

1) plaster
2) yellow layer measuring up to 32 μm
3) discontinuous black layer measuring up to 8 μm
4) discontinuous white layer measuring up to 24 μm
5) discontinuous orange layer measuring up to 8 μm



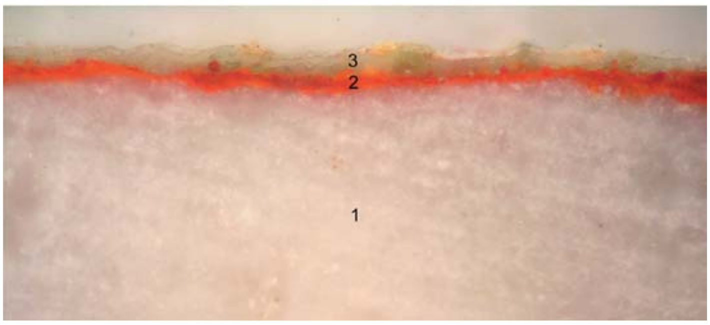
Jy020 (first part)

1) plaster
2) discontinuous reddish-brown layer measuring up to 4 μm
3) grayish-green layer measuring up to 64 μm
4) randomly appearing very thin brownish-black layer
5) randomly appearing dabs of white paint, measuring up to 20 μm



Jy020 (second part)

1) plaster
2) discontinuous reddish-brown layer measuring up to 8 μm
3) white layer measuring up to 80 μm



Jy021

1) plaster
2) red layer measuring 4-40 μm
3) discontinuous green layer measuring up to 24 μm

Fig. 3-27. Cross sections of samples of paint and plaster layers viewed under a stereoscopic microscope in reflected light



▲ *Cat. 57*

▲ *Cat. 228*

Cat. 122 ▶

Fig. 3-28. Evidence of "wet-into-wet" painting: *Cat. 57* – detail of the lotus-band decoration on a medallion around a jeweled cross; note how the red paint of the lotus flower is mixed with the white detail painted on top of it; *Cat. 228* – detail of an unidentified motif; the white paint used to execute the rotund details is mixed with the dark orange base color; *Cat. 122* – breast of a bird(?), viewed in diffused and raking light (left and right, respectively); note how the transversal, curved brushstrokes cut through the previously applied paint

Some depictions, however, appear to have been painted very spontaneously; there is no apparent organized structure of superimposed layers of paint nor any sign of intentional artistic effects. The colors are mixed, somewhat randomly applied, the details sloppy, the brushwork disorganized [*Fig. 3-31*]. These features indicate lesser artistic quality of the paintings in question, which may be ascribed to work of (a) less-skilled artist(s).

Cat. 110b ▶

Cat. 94 ▶

Cat. 94 ▶

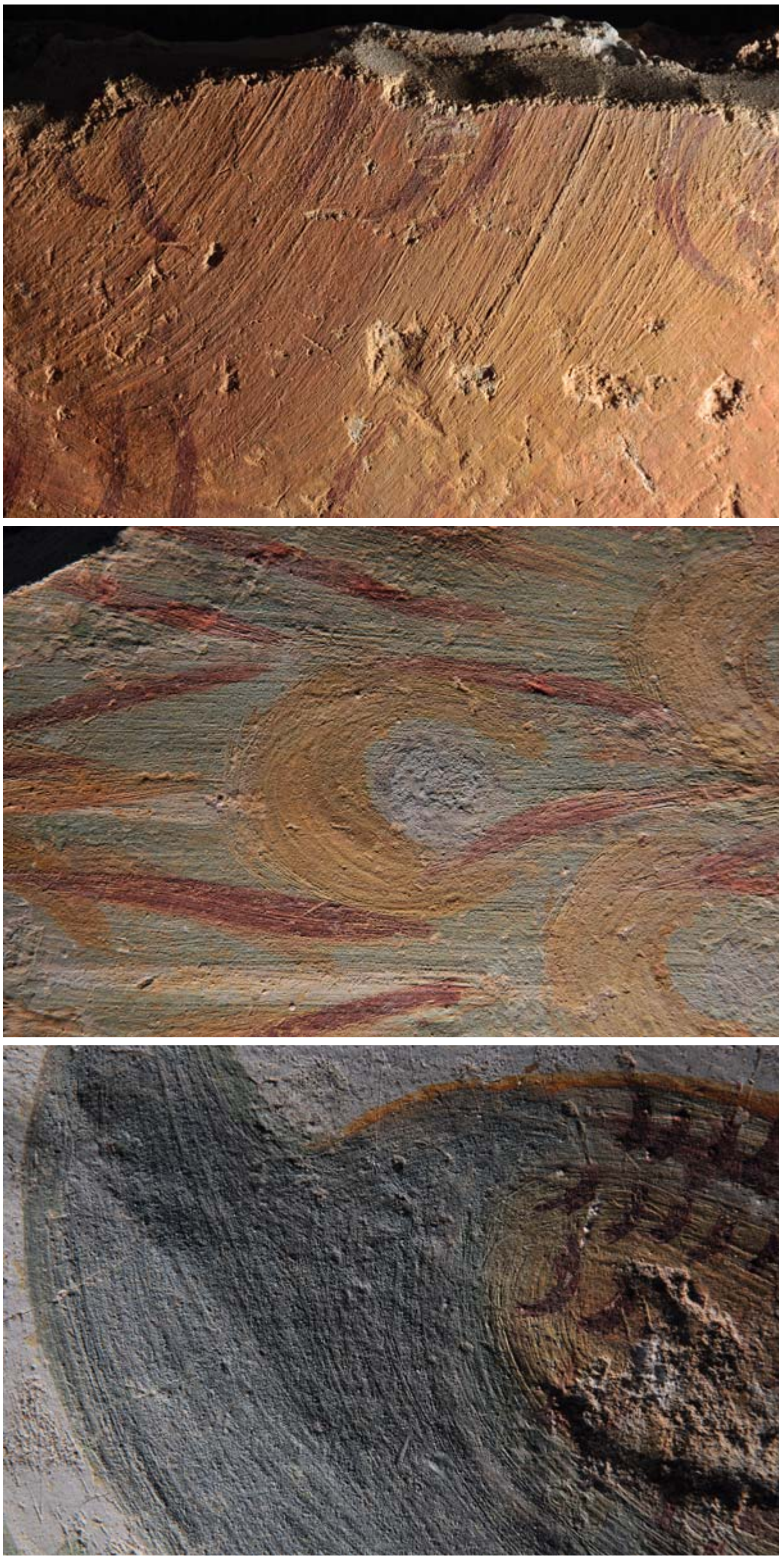


Fig. 3-29. Examples of brushwork, viewed in raking light: top, detail of a lamb's pelage (*Cat. 110b*) – note the wide brushstrokes of the ocher base color and slight color transitions within the pelage, and sets of crescent-shaped dark red details, possibly imitating fleece, on top of the base color; center, detail of a peacock's train (*Cat. 94*) – note superimposed layers of various colors of paint used to render the feathers and eyelets of the train; bottom, detail of a peacock's breast and flank (*Cat. 94*) – note broad brushstrokes and thick paint used to execute the painting



Fig. 3-30. Colorful, intentionally made paint splashes: detail of an unidentified depiction (*Cat. 81*)

▼ *Cat. 120* *Cat. 96* ▶

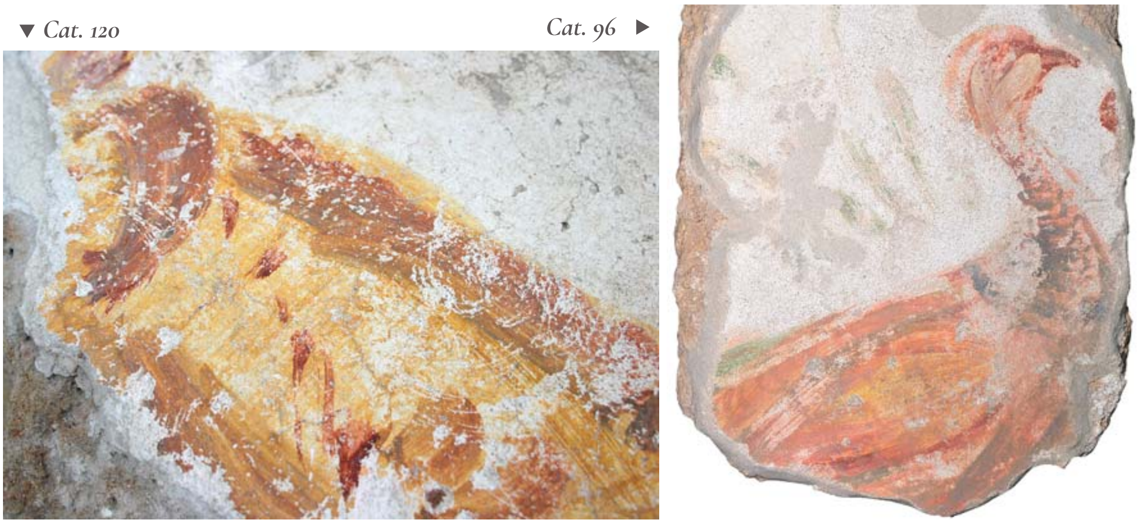


Fig. 3-31. Examples of disorganized paint handling: left, detail of an animal's neck (*Cat. 120*) and, right, depiction of a peacock(?) (*Cat. 96*); note the randomly applied colors, "dirty" paints, and quick, somewhat disorganized brushwork

3.8.2 Pigments

The color palette of wall paintings from Porphyreon comprises several basic colors: red, yellow, green, blue, dark brown/black, and white, transitional tones such as pink, and various hues of orange, green, and so forth. These colors were obtained by mixing a few pigments. Several colors have been analyzed in order to identify the pigments they contained: dark red, light red, yellow, dark green, light green, blue, black, and a white impasto [see *Table 3-1*].

Red and yellow

Red is probably the most common color in the wall paintings from Porphyreon. It was used to paint inscriptions, crosses, vegetal and geometric motifs, and monochrome genre(?) scenes, as well as details of animal and human figures. Two tonal variations were analyzed: sample Jy022 represented a dark red color from *Cat. 79b*, which depicts red triangles, and sample Jy023 was taken from one of the outer light red rings of a medallion from *Cat. 73*.

Examination of glass slides with smears of the samples under transmitted light microscopy (TLM) revealed the presence of very fine, rounded red, orange, and yellow particles of pigment, as well as fine colorless grains. The difference in color between the two samples results from the prevalence of red particles over orange and yellow ones in the dark red sample, and the dominance of orange particles over red and yellow ones in the light red sample.

Microchemical analyses of both samples comprised tests for the presence of Fe^{3+} cations (result positive of high intensity), Ca^{2+} cations (result positive of low intensity), Pb^{2+} cations (result negative) as well as gypsum (result negative). Therefore, the red parts of the wall paintings were executed with a mixture of red and yellow iron oxides.

Yellow is another common color in Porphyreon. It appears in depictions of jeweled crosses and decorations of the medallions, in animal and human figures, inhabited scrolls, and vegetal motifs. The analyzed sample of yellow color Jy024 was taken from the background of inhabited scrolls (*Cat. 172*).

Examination of a glass slide with a smear of the sample under TLM revealed a complex mix of various types of colored grains: rounded yellow particles of various sizes; fine, rounded red and colorless particles; light green, rounded particles; as well as black, orange, and brown rounded particles of various sizes. Microchemical analyses comprised tests for the presence of Fe^{2+} cations (result positive), Fe^{3+} cations (result positive), Ca^{2+} cations (result positive of moderate intensity), Pb^{2+} cations (result negative), Cu^{2+} cations (result negative), as well as gypsum (result positive of low intensity). It may be concluded that yellow parts of the wall paintings contain yellow iron oxides, as well as some other earthen pigment additions.

The general name "iron oxide reds", or "red earth", covers a family of pigments the color of which originates from the presence of iron (III) oxide, Fe_2O_3 (Eastaugh et al. 2004). Red iron oxide pigments can be found in natural clay deposits or they can be produced by burning natural iron oxide yellows (e.g., burnt sienna). Naturally occurring red earth was used as a pigment already in the later-Paleolithic cave paintings in Europe. Red earth comes in various color hues and intensity. It is characterized by good opacity, which, alongside its attractive appearance against white plaster, made it the most common pigment used for painted inscriptions. The same family of natural iron-based pigments also comprises iron oxide yellows, or yellow earth (e.g., goethite,

limonite). Their color ranges from light yellow to deep orange or brown. Yellow ocher has been used from prehistoric times, and sienna from ancient times.

Yellow and red iron oxides are characterized by chemical stability and excellent resistance to alkaline environments. They are also lightfast, which means that their colors do not alter over the course of time. Inexpensive and widely available, red and yellow earths constituted the most common colors of the ancient palette. They were described by Vitruvius and Pliny (Vitruvius, *TB*, VII, 7.2; Pliny, *NH*, XXXIII, 56; XXXV, 12–16), and identified virtually at every Mediterranean site with ancient wall paintings, to name just a few: Nea Paphos (Vieillescazes, Joliot, and Ménager 2016: 146–147), Jericho and Masada (Rozenberg 1997: 65–66; Porat and Ilani 1998: 79), Caesarea Maritima (Linn 2017: 776), and al-Humayma (Corbeil, Oleson, and Foote 1996: 426), as well as countless paintings from the Italian peninsula.

Application of red and yellow iron-based pigments in Late Antique wall paintings in the Eastern Mediterranean is attested in Jabal Harun (Danielli 2008: 415), in the Grotto of the Annunciation in Nazareth (Capasso Carola 1969: 172), and in Caesarea Maritima (Linn 1996: 50–52). Red and yellow earth were also detected in fragments of wall paintings at Horvat Karkur (Figueras, Nikolsky et al. 2004: 143–145), and they were likely used in wall paintings in the North-West Church at Hippos-Sussita (Burdajewicz 2017: 176), and the church in Chhim (Burdajewicz 2021). Red and yellow ochers were among the pigments used to decorate the Qusayr ʿAmra residence (Bianchin et al. 2007: 291).

Green

The third most common color in wall paintings from Porphyreon is green. It was used to render decorations of medallions surrounding the crosses, depictions of plants and birds, and the geometric motifs and details of jeweled crosses. Two samples were examined: sample Jy025 was taken from a depiction of a dark green wreath (*Cat. 45b*), while Jy026 comes from a depiction of light green leaves (*Cat. 138*).

Examination of a glass slide with a smear of sample Jy025 under TLM revealed a complex mixture of various types of colored grains: light green and black rounded particles of different size, fine and very fine yellow, orange, and red rounded particles, as well as colorless, rounded particles of different size. Sample Jy026 displayed a similar composition: light green, black, colorless, and rounded brown grains of diverse size, as well as fine and very fine orange, yellow and red rounded particles. The difference in the color of the two samples resulted from the varying amounts of particularly colored grains in each of them.

Microchemical analyses of both samples comprised tests for the presence of Fe^{2+} cations (in both cases result positive), Fe^{3+} cations (result positive), Ca^{2+} cations (result positive of low intensity), Pb^{2+} cations (result negative), Cu^{2+} cations (result negative), as well as gypsum (results negative for Jy025 and positive of low intensity for Jy026). The pigment used for green parts of the paintings was green earth, the tone of which was modified by mixing it with other earthen pigments (yellow, red, brown). SEM-EDS analysis of sample Jy027 confirmed this identification [*Fig. 3-32*; *Table 3-6*].

Green earth pigment can be based either on mineral celadonite or glauconite, accompanied by a mix of other minerals. Green earth occurs in various shades and color intensities, from bluish

Table 3-6. Results of a SEM-EDS analysis of sample Jy027 showing elements characteristic of green earth

Element	Weight%	Weight% Sigma	Atomic%	Compound%	Formula
Mg K	4.62	0.20	4.32	7.66	MgO
Al K	2.19	0.15	1.85	4.14	Al_2O_3
Si K	24.21	0.32	19.60	51.79	SiO_2
Cl K	0.68	0.13	0.44	0.83	Cl_2O
K K	5.46	0.19	3.18	6.58	K_2O
Ca K	13.46	0.26	7.64	18.83	CaO
Fe K	7.11	0.30	2.89	10.16	Fe_2O_3
O	42.27	0.40	60.08		
Total	100.00				

A ▶ ◀ B

C ▶

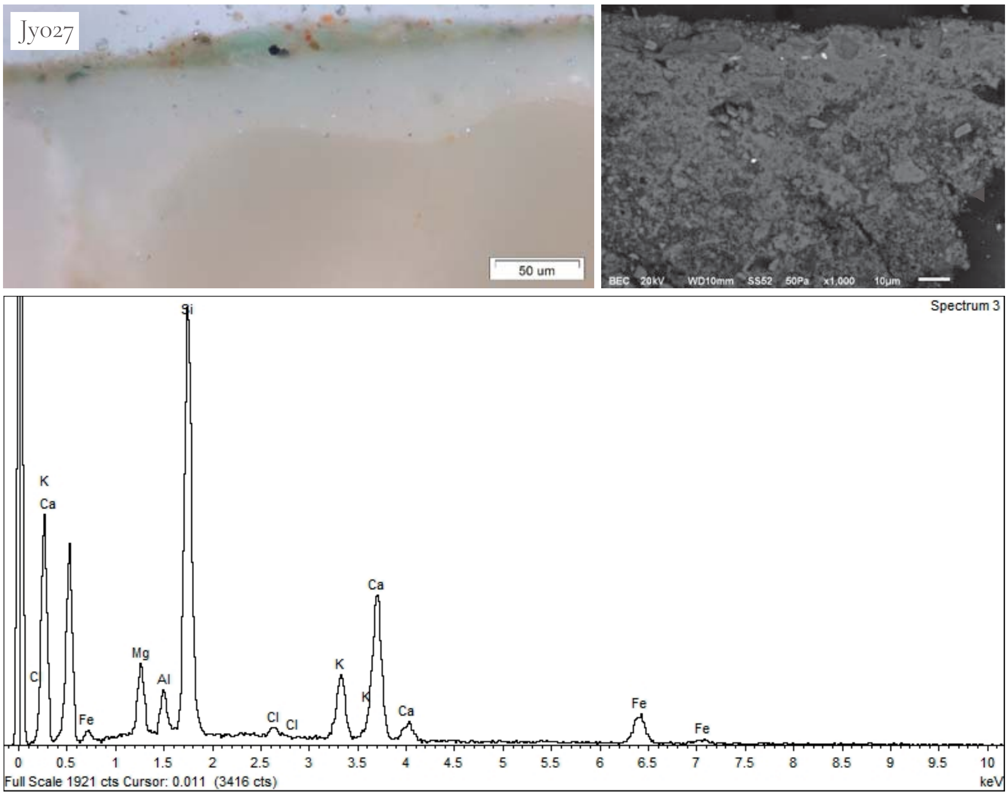


Fig. 3-32. Sample of a green paint layer (Jy027): A – viewed under a stereoscopic microscope in reflected light; B – back-scattered electron image; C – diffractogram

green (more typical of celadonite) to saturated green (Eastaugh et al. 2004: 175). It is a coarsely-grained pigment, which produces paint layers of low opacity, but is very stable, lightfast, and unreactive.

Green earth was applied in Roman wall paintings just as frequently as iron oxide reds and yellows (Béarat 1997; Aliatis et al. 2010: 1541). In the East, it has been identified in the synagogue at Magdala (Piovesan et al. 2016), in the Roman temples at Omrit (Uvarov, Popov, and Rozenberg 2015) and at Chhim (Burdajewicz 2021), in the Herodian palaces at Masada and Jericho (Porat and Ilani 1998: 77–80), and the Tomb of Three Brothers in Palmyra (Buisson et al. 2015: 1041). In all of these cases the pigment was celadonite-based. Celadonite does not occur on the Eastern Mediterranean coast; its closest deposits are located in Cyprus. It means that in the Roman period imported, celadonite-based green earth was favored over the locally available glauconite-based pigment.

Whether the use of celadonite was similarly common in the Late Antique period remains unknown. Green earth was detected in wall paintings from the Grotto of the Annunciation in Nazareth (Capasso Carola 1969: 172), on decorated stones from Area KK in Caesarea Maritima (Linn 1996: 50–52), in the North-West Church at Hippos-Sussita (Burdajewicz 2017: 176), and in Qusayr ʿAmra (Bianchin et al. 2007: 291), however, the exact type of mineral was not determined in any of these cases.

Raman spectroscopy analysis was performed on two samples of green pigment from Porphyreon (Jy028, Jy029) in order to determine whether it is based on celadonite or glauconite. No spectrum was obtained from sample Jy028, but the spectrum of sample Jy029 showed peaks characteristic of celadonite [*Fig. 3-33*].

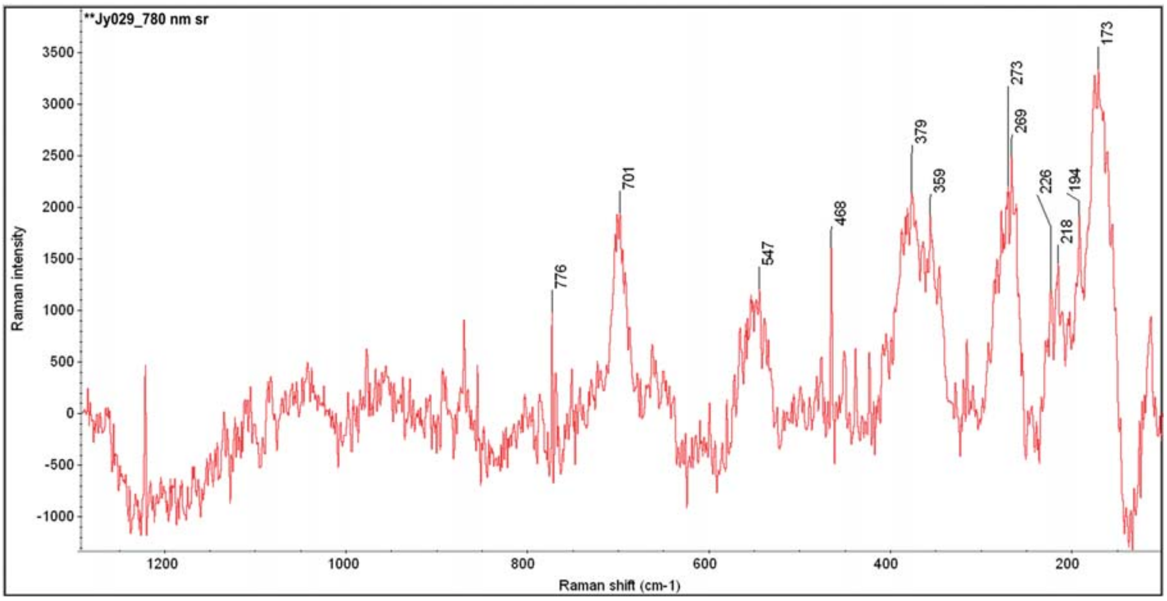


Fig. 3-33. *S*ample of a green paint layer (Jy029): Raman spectrum showing peaks characteristic of celadonite (701, 547, 379, 270 cm^{-1})

Blue

Blue pigment was applied very sparingly in the execution of the wall paintings from Porphyreon. Its use is evident in the rendering of a peacock's body (*Cat. 94*) and another bird's (peacock's?) breast shown next to a shrub (*Cat. 128*) [*Fig. 3-34* right]. Furthermore, on-site examination under a digital microscope revealed the presence of blue grains in paint layers which do not appear explicitly blue to the naked eye. They occur on, for example, the pale green shading of a green gem (*Cat. 78*), the greenish-blue lotus flowers (*Cat. 57*) [*Fig. 3-34* left], a gray disc (*Cat. 67*), and the bluish-gray part of stylized vegetal decoration of a medallion (*Cat. 50*). Archival slides from Saidah's excavations show the application of blue to the background of an imago clipeata (*Cat. 84*) and in a depiction of a parakeet (*Cat. 103*). It could have also been used to render the bird from *Cat. 33* and foliage from *Cat. 157–159*.

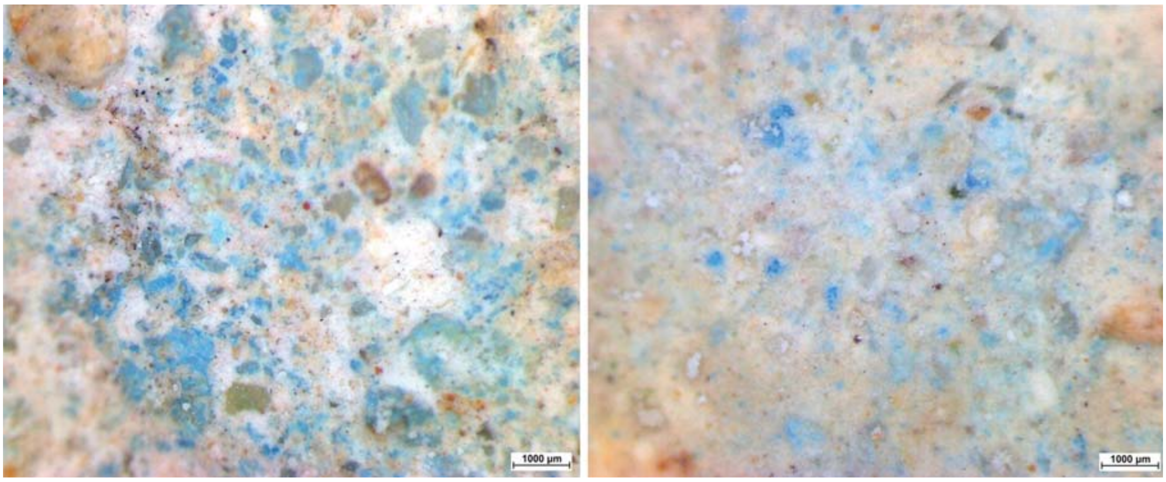


Fig. 3-34. Microphotographs of paint layer with blue pigment grains (left, *Cat. 57*; right, *Cat. 128*); note the coarseness of the grains and their varying sizes

Examination of a sample of a bluish paint layer from *Cat. 50* (Jy030) under TLM revealed light green and colorless rounded particles of varying sizes, blue and greenish-blue grains of diversified shapes and dimensions, as well as brown, yellow, orange, red and black rounded particles of varying sizes.

Microchemical analyses comprised tests for the presence of Fe^{2+} cations (result negative), Fe^{3+} cations (result positive of low intensity), Ca^{2+} cations (result positive of low intensity), Pb^{2+} cations (result negative), Cu^{2+} cations (result negative), as well as gypsum (result negative), indicating that the sample contained a minor addition of iron-based earthen pigments. The insolubility of blue particles in 3*M* HCl and concentrated HNO_3, alongside their appearance in transmitted light, suggests that it might have been Egyptian blue. A SEM-EDS analysis carried out on another sample of the pigment (Jy031)[17] revealed the presence of Si, Ca, and Cu elements [*Fig. 3-35*; *Table 3-7*]. These are characteristic of Egyptian blue, which is a copper calcium silicate.

[17] Blue paint appears on just a few fragments of wall paintings in the Beiteddine Museum, hence the sample of blue pigment was taken from one of the small loose fragments of painted plaster found in the debris.

Table 3-7. Results of a SEM-EDS analysis of sample Jy031 showing elements characteristic of Egyptian blue

Element	Weight%	Weight%	Atomic%	Compound%	Formula
		Sigma			
Na K	2.87	0.24	2.77	3.87	Na_2O
Mg K	6.10	0.19	5.56	10.12	MgO
Al K	3.27	0.16	2.68	6.18	Al_2O_3
Si K	23.47	0.30	18.49	50.20	SiO_2
Cl K	0.37	0.11	0.23	0.46	Cl_2O
Ca K	17.35	0.27	9.58	24.28	CaO
Fe K	1.66	0.19	0.66	2.37	Fe_2O_3
Cu K	1.02	0.23	0.36	1.28	CuO
Zn K	1.00	0.27	0.34	1.24	ZnO
O	42.88	0.41	59.33		
Total	100.00				

A ▶

◀ B

C ▶

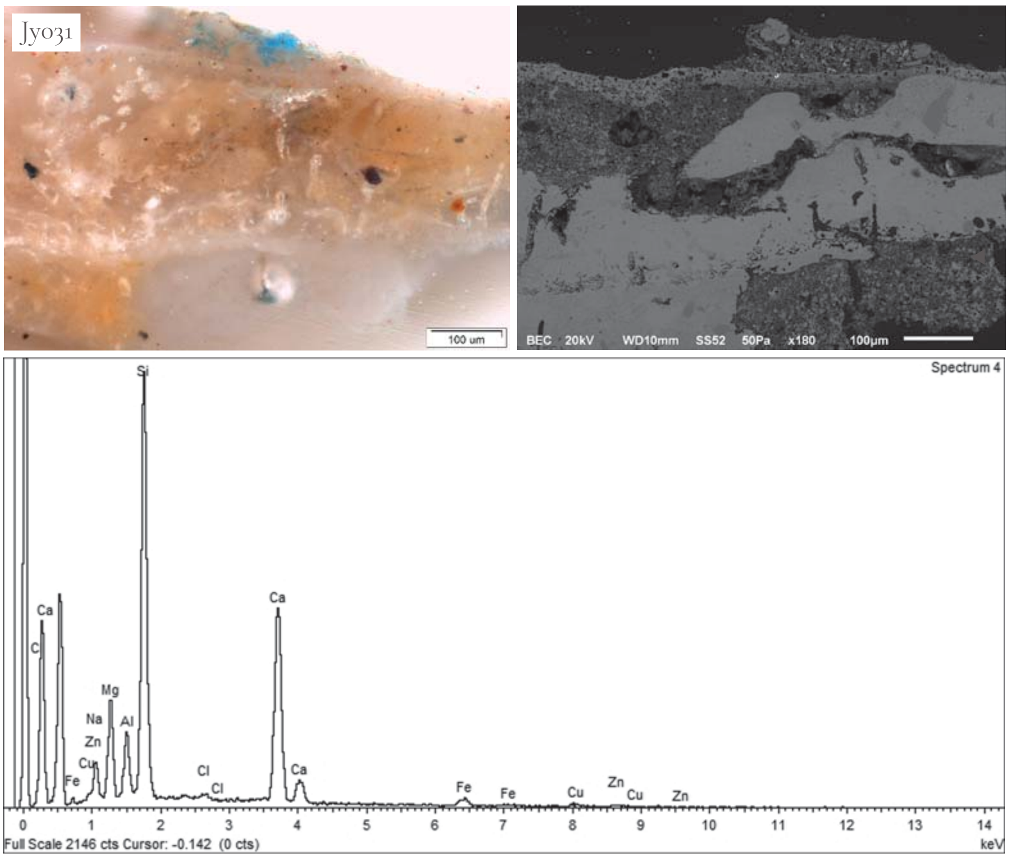


Fig. 3-35. Sample of a paint layer containing blue grains: A – viewed under a stereoscopic microscope in reflected light; B – back-scattered electron image; C – diffractogram

Egyptian blue is the first man-made pigment. Its earliest employment is attested on painted sculptures and sarcophagi from the Fourth Dynasty in Egypt (2613–2494 BCE; Eastaugh et al. 2004: 145). The production process of the pigment, as described by Vitruvius (*TB,* VII, 11.1), comprised grinding together and firing quartz, calcium carbonate, and copper. It was relatively expensive but was also the most frequently occurring kind of blue pigment in ancient wall painting. It comes in a variety of tones, ranging from light greenish-blue to deep blue. It is permanent, stable, resistant to high temperatures and lightfast, although it produces paint layers of low opacity.

Egyptian blue was commonly employed in Romano-Campanian mural decorations (e.g., see Aliatis et al. 2010: 1539–1540); it appears in Herodian palaces at Masada and Jericho (Porat and Ilani 1998: 80), a Herodian structure at Caesarea Maritima (Linn 2017: 779), the Roman temples at Omrit (Uvarov, Popov, and Rozenberg 2015: 784) and Chhim (Burdajewicz 2021), the Tomb of Three Brothers in Palmyra (Buisson et al. 2015: 1041), and Hellenistic and Roman tombs in Cyprus (Kakoulli, Fischer, and Michaelides 2010: 98).

Attested instances of the employment of Egyptian blue in Late Antique wall paintings are few. It was found in the painting of Christ and the Apostles in Vault 9 at Caesarea Maritima (Linn 1996: 50–52), and in fragments of paintings from the Grotto of the Annunciation at Nazareth (Capasso Carola 1969: 172). It was also detected in fragments of wall paintings at Horvat Karkur (Figueras, Nikolsky et al. 2004: 143–145). A recent study through visible induced luminescence (VIL) imaging revealed its presence in the remains of the Transfiguration scene painted in the Southern Church at Shivta/Sobota (Linn, Tepper, and Bar-Oz 2017).

Black

The use of black is very limited in the wall paintings from Porphyreon. It occurs in the background of a “gemstone” motif (*Cat. 77*, *78*), and in the details of some of the depictions of animals (*Cat. 31*, *97*, *104*, *127*) and jeweled crosses (*Cat. 34*, *35*). A sample of black pigment (Jy032) was taken from the background of one of the “gemstone” motifs (*Cat. 77*).

Examination of a glass slide with a smear of the sample under TLM revealed a complex mix of various types of colored grains characterized by diverse size: light green and greenish-brown rounded particles, very fine black particles, brown, yellow, orange and red particles, as well as colorless grains. Microchemical analyses of the sample comprised tests for the presence of Fe^{2+} cations (result negative), Fe^{3+} cations (result positive of low intensity), Ca^{2+} cations (result positive of low intensity), Pb^{2+} cations (result negative), Cu^{2+} cations (result negative), as well as gypsum (result positive of low intensity). The appearance of the black and brown particles under TLM does not correspond to the typical appearance of carbon-based pigments. It is possible that a mixture of iron and manganese oxides was used to achieve the very dark color.

White

White paint was used to render details of some of the depictions, such as the “pearls” on jeweled crosses and “gemstone” motif, or the white teeth of a lioness (*Cat. 119*). It is almost always applied very thickly. Sample Jy033 was taken from one of the dabs of white paint on *Cat. 77*.

Examination of the sample in reflected light revealed that it is composed of very fine, uniform white particles. Particles of other colors were accessory and could be considered as contamination. Microchemical analyses of the sample comprised tests for detection of Ca^{2+} cations (result positive of high intensity), Pb^{2+} cations (result negative), as well as gypsum (result positive of low intensity). The results indicate that the sample consists of calcium carbonate and possibly some admixture/contamination of gypsum. Most likely slaked lime, perhaps with some addition of calcium carbonate white, was used to execute the white details of the paintings.

3.8.3 Painting technique

Ancient painters had three main painting techniques at their disposal: fresco, lime-painting, and secco.[18] In the fresco technique, dry pigments are mixed with water and applied to damp (fresh) lime-based plaster. Calcium carbonate ($CaCO_3$), which forms from the calcium hydroxide ($Ca(OH)_2$) in the plaster during the carbonatation process, fixes the pigments to the support and renders the paint layers permanent and insoluble. In lime-painting, the painting is executed on dry plaster with the use of pigments mixed with lime water or with lime milk.[19] As in fresco painting, calcium hydroxide from the lime solution reacts with carbon dioxide and forms insoluble calcium carbonate, which binds the pigments. The third technique available to ancient painters, secco painting, is also executed on dry support and employs an organic substance as a binder (e.g., animal glue, gum Arabic).

Determining the painting technique of an ancient painting is complicated and not always possible. Fresco and lime-painting are practically indiscernible by analytical means, because in both techniques calcium carbonate eventually becomes the binder of the paint layer. Moreover, both of them require the same palette of pigments which are resistant to an alkaline environment. Meanwhile, the presence of a pigment that is not resistant to such an environment may indicate that the painters executed the painting with an organic binder on dry support. The use of organic binders can be attested using appropriate analytical methods (e.g., GC/MS, HPLC-MS). Their detection in samples of ancient paintings may be hampered, however, because they readily deteriorate over time (Brecoulaki et al. 2012: 2866; Cuní 2016; Sotiropoulou, Papliaka, and Vaccari 2016; Horn 2018).

The appearance and state of preservation of the paintings can also provide clues as to the painting technique. Paintings executed in fresco usually have vivid colors, and they survive in much better condition than wall paintings executed in other techniques. These phenomena occur because the pigments are sealed under a surface veil of calcium carbonate, which guarantees their vividness and durability. Meanwhile, paint layers executed with the use of lime water/milk or with organic binders are not as bound to the support; they often exhibit poor cohesion and may appear faint and faded.[20]

[18] Lime-painting is often called secco (Italian for "dry") because it is executed on dry support. Nevertheless, this term is also used for wall painting employing organic binder. For the sake of clarity, the term "lime-painting" is used here for lime-based painting on dry support and "secco" for organic binder painting, also executed on dry support.

[19] Water solution of calcium hydroxide, or simply speaking, diluted slaked lime.

[20] For color differences between mock-ups of fresco and lime-painting technique see Piovesan et al. 2012: Fig. 1.

Mass spectroscopy performed on sample Jy034 in order to determine the presence of an organic admixture to the paint layers gave negative results. As noted above, organic binders may be difficult to detect due to their natural decomposition over time. Nevertheless, the lack of even a nominal indication of organic substances in the paint layers from Porphyreon makes it more probable that they were executed with the use of a mineral binder, that is, the fresco or lime-painting techniques.

A method for distinguishing between lime-painting and fresco based on the microstratigraphic and microtextural features of cross sections of paint layers viewed under optical microscopy (OM) and scanning electron microscopy (SEM) was proposed by Rebecca Piovesan and colleagues (Piovesan et al. 2012). According to their study, paint layers executed in fresco technique, viewed under OM, tended to be generally thin (less than 50 μm) and had rough and irregular surfaces. Coarser grains of pigment protruded from the surface or lay on top of it. In lime-painting, the paint layer was significantly thicker (up to 650 μm), although, as noted by the authors, the thickness is the result of the painting manner and the painter's skill, so it could not be considered as an idiosyncratic feature. Lime-painting was also characterized by a smooth surface and a uniform paint layer in which particles of pigments are regularly distributed regardless of their size and are completely contained within a calcium carbonate matrix (Piovesan et al. 2012: 727).

SEM elemental distribution maps and back-scattered electron (BSE) images revealed that in fresco, carbonatation of the binder occurs throughout the entire thickness of the paint layer and in the uppermost part of the plaster. Meanwhile, lime-painting was characterized by the presence of a Ca-rich layer on top of the plaster, which indicated that the plaster had begun to set before the paints were applied. The contact line between the uppermost part of the plaster and the paint was marked and sharp. A thin carbonatation layer was also present on top of the lime-paint layer.

Following the results of this study, samples of paint layers from Porphyreon were examined under OM and SEM. The features of the paint layers observed under OM were inconclusive due to variations in the paint-handling and abrasion of the paintings. Examination of cross sections of the paint layers under SEM did not give unequivocal results either. The particles of pigments seem to be well-contained and evenly distributed within the calcium-carbonate matrix, and they do not protrude from the paint surface. Samples Jy034 and Jy036 display a marked but discontinuous carbonatation layer in the upper part of the plaster, underneath the paint layer [*Fig. 3-36:A,B*]. These features, according to Piovesan et al. (2012), could be indicative of the lime-painting technique. However, in some areas of these samples, as well as in sample Jy035, the paint layer appears to blend with the plaster (presumably, an indication of fresco) [*Fig. 3-36:C*]. Sample Jy031 has a notable carbonatation layer on top of the paint layer (an indication of lime-painting), but no such layer on the border between the plaster and the paint layer has been noted (a lack of which is indicative of fresco) [*Fig. 3-37*].

It cannot be ruled out that the wall paintings were executed with the use of lime water or lime milk, but on plaster which in some places had not dried entirely or evenly, giving an unintended fresco technique effect. It could explain the contradictory characteristics of the examined paint layers.

There are a few other arguments in favor of the application of the lime-painting technique in Porphyreon. One of them is the pasty, opaque appearance of paint layers on many of the painting fragments. This opacity and thickness, especially in the case of pigments such as green earth,

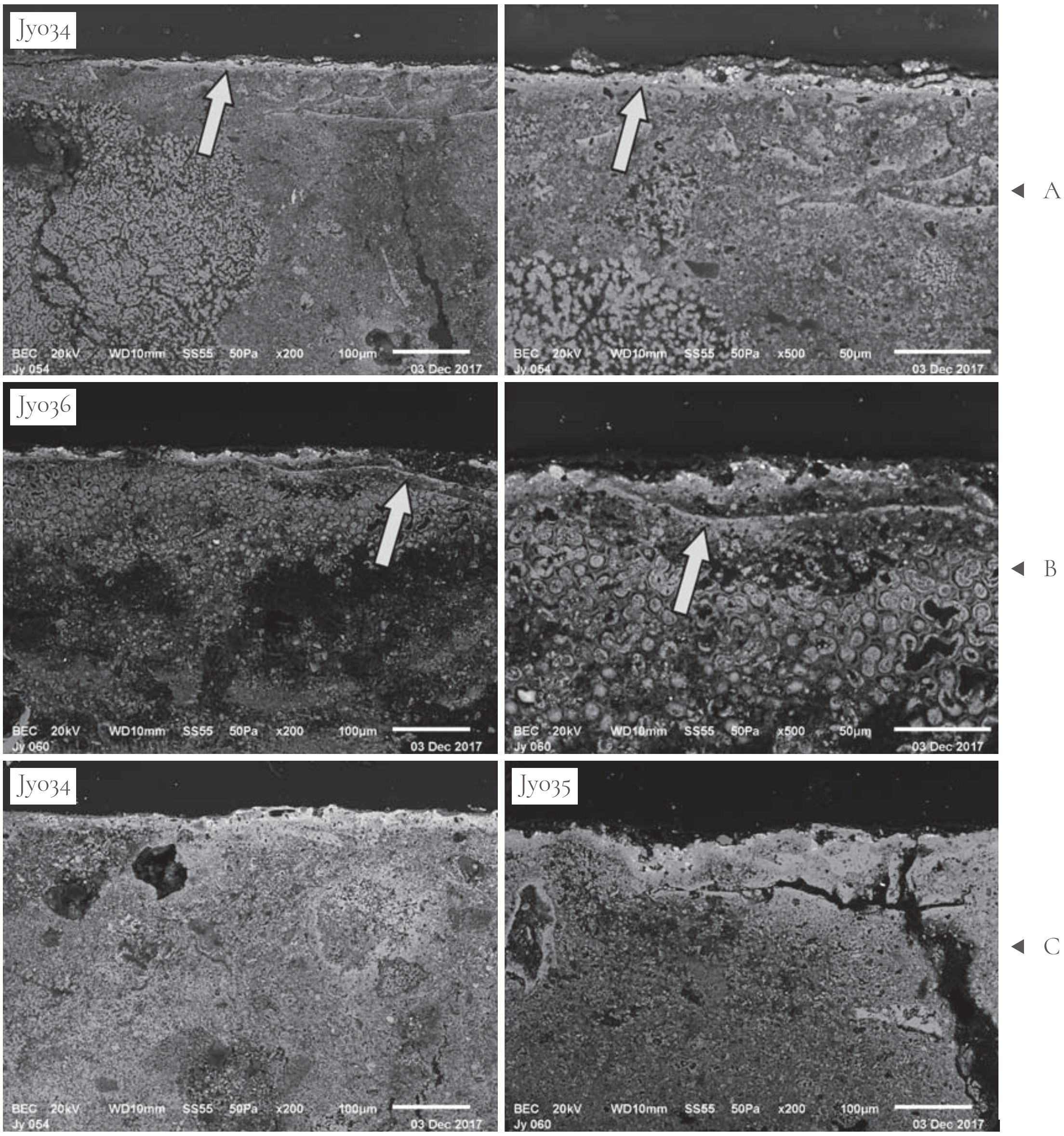


Fig. 3-36. Back-scattered electron images of samples of a paint layer: A, B – showing distinct carbonatation layer on top of the plaster, underneath the paint layer; C – showing carbonatation of the paint layer gradually passing into the plaster

which itself produces semi-transparent paint layers, might have been achieved by mixing the pigments with lime water or lime milk.

Next, the ancient plasters on which fresco paintings were executed tend to be thin, rarely exceeding 5 mm. This is because the plasterer had to work swiftly to leave enough time for the painter to complete the work before the plaster set. Meanwhile, the plasters from Porphyreon measure on average around 8 mm and oftentimes reach up to 15 mm. In addition, it appears logical that painting on fresh thick plaster would be difficult and would have left some concave brush-marks on its surface. Such brush-marks were observed only on *Cat. 80* [*Fig. 3-38*]. Since the painting represents a very simple, carelessly executed, red geometric motif, it cannot be considered as representative of the entire assemblage.

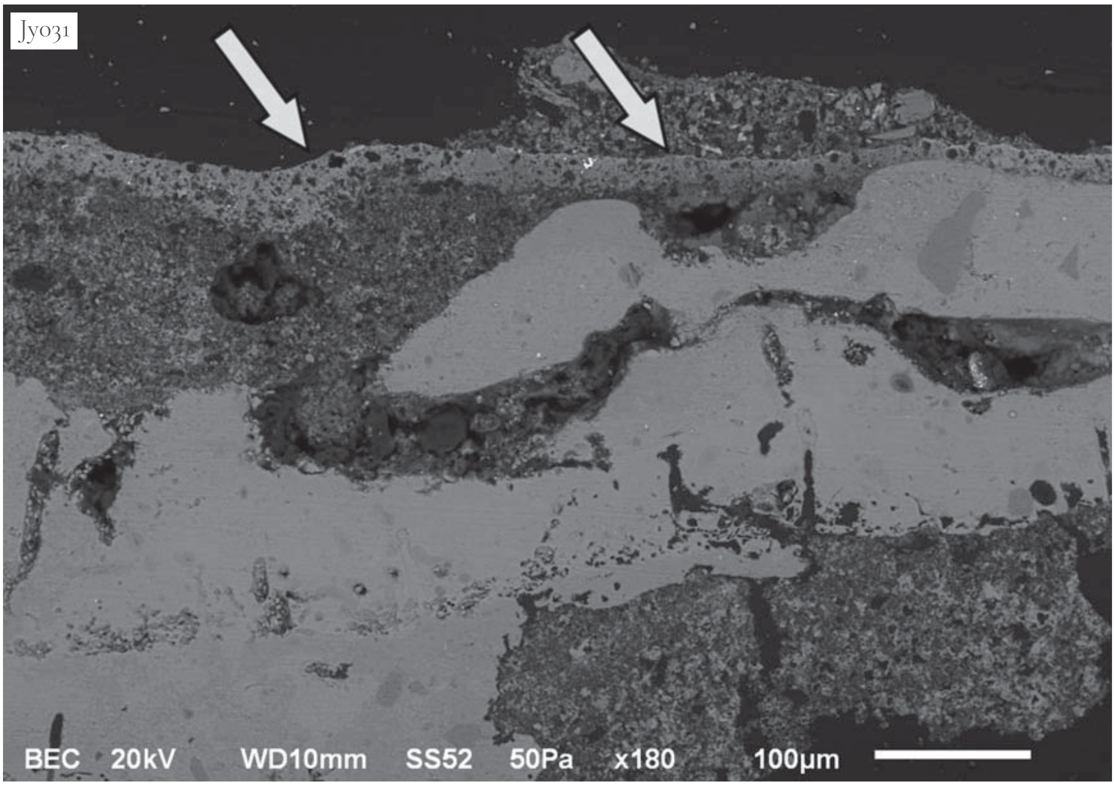


Fig. 3-37. Back-scattered electron image of a sample of paint layer.
Note the carbonatation layer on top of the paint layer



Fig. 3-38. Surface detail of *Cat. 80a* viewed in raking light;
note brush marks clearly made when the plaster was still wet

Finally, the fact that the guiding lines for inscriptions were not incised in the plaster, but were made with cord dipped in paint, suggests that the plaster was at least partly set at the time of painting.

With Hellenistic and Roman-era wall paintings there is little doubt that they were generally executed in fresco technique with some final touches made in lime-painting or secco. However, the technique of Late Antique wall paintings is an almost entirely unexplored subject. Results of the studies on painting technique carried out on a handful of sites yield data that are inconclusive and too spotty for generalizations. The wall paintings found at the North-West Church at Hippos-Sussita and the church at Chhim were likely executed in lime-painting or secco technique (Burdajewicz 2017: 176; 2021). Wall painting fragments from Jabal Harun were classified as painted with the use of an organic binder, although some fragments could have possibly been executed *al fresco* (Danielli 2008: 415). In all of these three cases, the authors' opinions are based chiefly on the evaluation of the condition of the paint layers. In the Grotto of the Annunciation, tests for the presence of organic binders in wall paintings were performed with negative results, but no further discussion of painting technique was offered (Capasso Carola 1969: 172). Calcium carbonate binder of the paint layers, alongside egg-based tempera, was detected in Umayyad wall paintings from Qusayr Amra (Bianchin et al. 2007: 291). The use of the latter medium might have been governed by the application of such pigments as lead white or realgar, which are incompatible with an alkaline environment and thus cannot be used in fresco or lime-painting where a lime-based binder is involved.

3.9 Materials and workshop practices of painters from Porphyreon

As noted in the introduction to this chapter, the archaeometric study of the wall paintings from Porphyreon had a twofold objective: to identify the materials employed and to examine the manner of their application. Considering the paucity of reference material in the form of investigated Late Antique wall paintings from the Eastern Mediterranean, it is difficult to place the obtained results within a broader context. Some preliminary observations are possible, however, when they are compared to the means and materials employed in Roman times. Hopefully, the results of this study will inspire further archaeometric examinations of wall paintings from other Levantine sites, forming eventually a comprehensive body of knowledge on Late Antique painting techniques and workshop practices.

3.9.1 Raw materials

The craftsmen from Late Antique Porphyreon followed the Roman-age tradition of using lime as the principal binder of mortars and plasters. Even though some presence of gypsum was attested in the renders and could be paralleled by several instances of its use on other Late Antique sites, especially those located in desert environments, it cannot be said at this point whether it was an intentional admixture or precipitated in the process of sulphation.

The mineral filler used for the preparation of the mortars and plasters was acquired locally and consists of beach sand. Exploiting local geological resources for the sake of minimalizing

transportation costs was a common practice in the Roman period, although some special admixtures would occasionally be employed with the intent of altering the properties of the renders. For example, Vitruvius advised using marble powder as a filler in the three final coats of plaster to achieve surfaces that were hard, durable, and free of cracks.

Pigments identified in the wall paintings from Porphyreon correspond to a basic ancient palette. It relied on natural earthen pigments which provided various tonalities of reds, yellows, browns, and greens; a mixture of iron and manganese oxides was used for black, and calcium carbonate was employed as white (Ling 1991: 207–209). The principal blue pigment on that palette was Egyptian blue, which was manmade.

These pigments were defined as “plain” by Pliny (*NH*, XXXV, 12), and in the Roman period they were provided by the painters’ workshop, as opposed to the “florid” colors, such as cinnabar, which had to be financed by the patron who wanted them to be used. The price differences between the plain and florid pigments were substantial. We learn from Pliny that the cost of the basic colors ranged from about half a denarius per pound of the cheapest yellow earth to eight denarii per pound of the Egyptian blue (*NH*, XXXIII, 56–57; Ling 1991: 209). For comparison, a pound of cinnabar was worth as much as 70 denarii (*NH*, XXXIII, 40) Although we do not know whether these prices held true in Late Antiquity, they give us an idea of the value differences between particular kinds of pigments.

The wall paintings from Porphyreon, as well as other examined wall paintings from the same period discussed here, were made with the basic pigments. Symptomatic is the modest use of Egyptian blue, the most expensive pigment on the “plain” palette, evident both at Porphyreon and on other more or less contemporaneous sites, and likely indicative of low budgets for the commissions. It is commonly assumed that, save for occasional occurrences in the 7th–9th centuries, Egyptian blue practically disappears from the painters’ palettes after the 4th century CE, to reappear again in the Middle Ages (Gaetani, Santamaria, and Seccaroni 2004; Linn, Tepper, and Bar-Oz 2017: 3). However, the scarcity of surviving Late Antique wall paintings inevitably limits our knowledge of pigments employed, creating the false impression that Egyptian blue had ceased to be used by that period. Its occurrence in Porphyreon, Shivta/Sobota, Horvat Karkur, Caesarea Maritima, and Nazareth contradicts this assumption. At the same time, its restrained use should raise questions as to patrons’ financial standing.

The detection of celadonite-based green earth is another noteworthy outcome of the pigment analyses. Celadonite does not occur on the Eastern Mediterranean coast, and the closest sources of this pigment are located in Cyprus (see *§ 3.8.2*). So far, all of the examined green earths from the Roman-period wall paintings from Syro-Palestine have turned out to be celadonite-based. Unfortunately, no such corresponding studies have been carried out on green earths employed in Late Antique wall paintings. As a result, it is not known whether green earth continued to be imported in Late Antiquity or was abandoned in favor of locally available (and possibly cheaper) green earth, which is based on glauconite. Therefore, celadonite-based green earth detected in Porphyreon is the first confirmed instance of its use in Late Antique wall paintings and an invitation to further studies on the exploitation of pigment sources and pigment trade patterns in the Late Antique Eastern Mediterranean.

3.9.2 Workshop features and manner of application of materials

While there were no particular surprises regarding the selection of materials used for the execution of wall paintings at Porphyreon, observations of the manner of application of these materials and some of the characteristics of the workshops proved revealing. First, the number of layers of renders constituting the wall painting substrate was significantly reduced compared to Roman practice. This consisted of usually three to four layers of render, including the topmost plaster (Barbet and Allag 1972: table opposite page 1069; Paradisi et al. 2012: 1062),[21] or two to three layers in the Eastern provinces.[22] In Late Antiquity, the total number of renders rarely reached three layers.[23] In Porphyreon, the wall paintings were executed on a single layer of plaster, assuming that the "preparatory" mortars (Types 1 and 2), which appear under some parts of the plasters, had the primary function of construction mortars used to bind the masonry members together and to seal the joints between them [see *Fig. 3-2*]. It should be added that the reduction of the number of coatings inevitably reduced the overall thickness of the wall render and affected its durability.

Next, there is the varying level of diligence in the preparation of aggregates used in the mortars and plasters. Beach sand has been found to be the raw material used for both the mortars and the plaster, but the sand for the mortars was sifted, as evidenced by the small, uniform grain size, especially apparent in Type 2 mortar. The procedure made the mortars homogeneous, with fine, tightly packed filler. In the case of aggregates used for plasters, sifting was skipped, resulting in an inhomogeneous mix of grains of different shape and size, some very large. The same approach was observed in Sa'adon, where only the aggregates for the mortar were sifted (see *§ 3.6.2*). The uniformity of aggregate size determines how tightly they can be packed, which in turn, influences the density and the durability of the renders (see *§ 4.2.4*). The differences in aggregate grain size in the mortars and plasters from Porphyreon account for the relatively good condition of the former and the poor state of preservation of the latter.

Any situation in which the lower layer of render contains finer filler than the plaster contradicts established procedures applied in the Roman-period craft. According to the guidelines set down by Vitruvius (as well as common sense), subsequent layers of renders were supposed to be progressively finer towards the surface; the three final layers would contain marble powder as the sole filler (*TB*, VII, 3; 6–9). Application of marble powder or another kind of very fine aggregate in the plaster would make it smooth and hard, and this often accounted for the flawless luster of

[21] The Vitruvian ideal of a seven-layer substrate (an initial wall rendering followed by six layers of mortar; *TB*, VII, 3; 5–7) was hardly ever pursued. So far, a six-layered substrate of wall paintings has been confirmed in the House of Livia and the Farnesina House in Rome (Cagiano de Azevedo 1949: 148, Fig. 6).

[22] Three layers of renders were observed in the wall paintings in Nea Paphos (Vieillescazes, Joliot, and Ménager 2016: 146–147); two to four layers in Caesarea Maritima (Linn 1996: 70–71), three layers in the sanctuary at Chhim (Burdajewicz 2021), two to three layers in the temple of Omrit and in the Herodian palace in Jericho (Rozenberg 1997: 63; 2011: 55) and only two layers in the palace at Masada (Foerster 1995: 29–35; Porat and Ilani 1998: 81).

[23] In the church of Chhim, two to three layers were used (Burdajewicz 2021). Two coatings were employed in the North-West Church at Hippos-Sussita (Burdajewicz 2017: 174–175), at Sa'adon (Burdajewicz 2018), in the cemetery church at Horvat Karkur (Figueras, Jenkins et al. 2004: 71), the churches of Rehovot (Tsafrir 1988: 29) and Jabal Harun (Danielli 2008: 411), and the houses in Alexandria (Rodziewicz 1984: 123–127). One to three layers of render are present in paintings from the Grotto of the Annunciation in Nazareth (Capasso Carola 1969: 169, 173).

many Roman paintings.[24] The examined substrate layers of Late Antique wall paintings conform in a broad sense to the rule of decreasing size of aggregates toward the surface, although usually this gradation is rather crude: mortars contain some aggregates, while plasters contain none or trace quantities of aggregates. In Porphyreon, however, the scheme is reversed: finely grained aggregates were used for mortars, whereas large aggregates were added to the plaster. Sifting of the sand applied in the former case betrays attention paid to the preparation of mortars, and its lack in the case of plasters. A plausible explanation of this difference assumes that two different craftsmen teams were responsible for their execution. As already noted above, the mortars of wall paintings were primarily construction mortars, which appear between the masonry members and were used to seal the gaps between them and smooth the most pronounced irregularities of the walls. Thus, it would be logical to assume that they were prepared and applied by a team of masons. Meanwhile, the plasters could have been prepared and applied by craftsmen responsible for the execution of the paintings who appear to have paid less attention to the preparation of the aggregates.

Finally, there is the matter of painting technique. Even though there is no absolute certainty in this regard, a number of clues, such as the OM and SEM images of the paint layers, the thickness of the plaster, the lack of incisions in the plaster, and a thick, pasty appearance of the paints, point to the application of lime-painting technique in the wall paintings from Porphyreon. If this supposition is correct, it conforms with the overall picture of simplification of the painting process at Porphyreon, and it points to an essential difference between the organization of painters' workshops in the Roman and Late Antique periods.

In the Roman period, the organization of workshop procedures was much influenced by the principal painting technique, that is, fresco, employed by the artists of that time. To achieve durability and brilliance of the colors in fresco, it is essential to complete the painting before the plaster sets.[25] This means that the plasterer and the painter had to work almost simultaneously and to divide their work into stages that could be completed within a day.[26] In addition, execution of a wall painting in parts requires precise compositional pre-planning and adherence to a design throughout the undertaking. A funerary stele from Gaul with a unique depiction of an operating workshop, involving a plasterer, a painter, an assistant preparing the render, and possibly the master-painter consulting a scroll with a design, illustrates such simultaneous work of different craftsmen (Uffler 1971; Ling 1991: Fig. 234).

To what extent these procedures were followed in the Late Antique Levant is a pending question. Nevertheless, a few studies of Late Antique wall paintings, including the one presented here, have shown the plausible popularity of lime-painting and secco techniques.[27] Both of these

[24] The price of marble powder made it a product only for the wealthiest patrons (Barbet and Allag 1972: 970). In the eastern provinces, marble powder was found in Herodian structures from Caesarea Maritima (Linn 1996: 36), Herodion (Rozenberg 1981: 71–72), and Jericho (Edwards, Farwell, and Rozenberg 1999: 361). Ground calcite was used as a cheaper substitute of the marble powder (Davey and Ling 1981: 59; Béarat 1996: 91–92; Piovesan et al. 2011: 2635; Gutman et al. 2016; Burdajewicz 2021).

[25] After it dries, the painting can be finished with the use of lime water/milk or organic binders.

[26] *Giornata di lavoro*, or the "golden hour" is the term for the time needed to complete the work, usually between six and eight hours depending on air temperature and humidity.

[27] Examples include the North-West Church at Hippos-Sussita (Burdajewicz 2017: 175–176), the churches at Jabal Harun (Danielli 2008: 415) and Chhim (Burdajewicz 2021), and the Qusayr Amra castle (Bianchino et al. 2007: 291).

techniques allow for executing the paintings on dry plaster, and thus they are technically less sophisticated than painting *al fresco*. What is even more important is that the painting process may be carried out independently from the plastering and that the plastering may be done also well before the execution of the painting and even by a completely different team. As a result, the organization of the painting process when lime- or secco painting is involved can be much more straightforward, and likely more economical in terms of the number of people involved and the time required to complete the work.

Furthermore, artists employing the lime-painting or secco technique did not have to divide their work-time according to the parts of a wall which can be painted in one day, nor were they constrained by strict compositional pre-planning. As demonstrated already, most of the fragments of wall paintings from Porphyreon do not retain any traces of preparatory marks. This, obviously, does not rule out that some preliminary sketches might have been made on the plaster. Nevertheless, it is plausible that artists working on dry plaster had more freedom in choosing and changing composition layout. For comparison, it should be kept in mind that Roman-period wall paintings often bear all kinds of preparatory marks: incised in wet plaster, snapped against it, or traced with paint.

The reduction of the number of renders, the carelessness in the preparation of aggregates for the plaster, and, possibly, the use of simpler painting techniques conjure up a picture of far-reaching simplification of the craft of wall painting in Late Antiquity. A question which remains open is whether this simplification was caused by a decline in craftsmen's know-how or was driven by other factors, such as lesser financial capabilities of the patrons. In Porphyreon, the presence of colorful mosaic pavements in the basilica, characterized by a considerable level of complexity and artistic refinement, as well as marble revetment and possibly also marble pavements, suggest that the donors were able to make a substantial financial effort to adorn the interior of their church.

Thus, if money was not an issue, was it perhaps a lack of know-how and a deficiency of skills on the part of the craftsmen? After all, the main conclusion which can be drawn from the present archaeometric study is that the principal change in the technique of execution of wall paintings did not concern the materials, which generally remained the same, but the manner of their preparation and application. Nevertheless, before both the Late Antique wall paintings and the skills of their creators are devalued, it should be said that technical simplicity does not rule out the possibility of specific technical concepts and know-how being pursued in Late Antiquity.

Even though the construction and decoration of the basilica was doubtlessly an undertaking with a much higher budget than that of the owners of the common Porphyrean houses, there are practically no technical differences between the execution of the paintings coming from the basilica and those from the residential district. There are some variations in style and artistic quality between particular paintings, but the execution of the mineral substrates seems universal. Since it is rather improbable that both the basilica and all the houses were constructed, plastered, and decorated simultaneously, the wall paintings from Porphyreon may be the product of (a) workshop(s) which formulated, maintained, and consistently applied certain technical know-how. Such a workshop could have been set up directly in Porphyreon, or in a larger nearby city, such as Sidon (Burdajewicz 2020a). It should also be remembered that the lime-painting technique presumably employed in Porphyreon allowed for painting on set plaster. This means that the plaster may or may not have been executed by the painters' workshop.

In either case, if what has been described is indeed testimony of established procedures and techniques of execution of wall paintings and their substrates, the reach would have not been more than local. As noted before, until now only a few examples of Late Antique wall paintings have been examined from the point of view of the technique of execution, thus caution is advised in making any generalizations. Nevertheless, the handful of sites where such investigations have been carried out showed greatly diverse approaches to the execution of wall paintings and their substrate layers. Therefore, it seems that the know-how of Late Antique painters was likely far from being as universal as the procedures of the Roman-period artists.

Chapter 4

PRESERVING THE WALL PAINTINGS: CONSERVATION PROJECT 2014–2019

4.1 Conservation and storage of wall paintings in the Beiteddine Museum

It is not the age of an archaeological find, but the way it is treated and taken care of post-discovery that usually determines its chances of long-term survival. Different approaches to the safeguarding and conservation of the wall paintings from Porphyreon were adopted in the past, as were also the methods of exploration during the excavation campaigns of 1975, 1987, and more recently. Thus, the state of preservation of the paintings discovered in the 1980s presents a different array of conservation issues than the fragments unearthed by the PCMA-DGA archaeological expedition in recent years.

The wall paintings are currently deposited in the Beiteddine Palace, a late-18th/early-19th-century building constructed under Amir Bashir al-Shihabi (1767–1850) on the site of an old Druze hermitage (Jounblat, Seeden, and Atallah 1989; Harris 2012: 136–137). Designed by Italian architects, it combines features of Italian and Arab stone architecture and Damascene interior decoration [*Fig. 4-1*]. Bechara el-Khoury, the first President of Lebanon, made the palace his



Fig. 4-1. The Beiteddine Palace looking north

official summer residence. In the late 1980s, Walid Joumblatt, the leader of the Lebanese Druze and the Minister of Public Works, Transport, and Tourism, transformed the palace into a museum, depositing there his private collection of archaeological and ethnographic artifacts, as well as numerous floor mosaics transferred from various archaeological sites, including Porphyreon. In 1999, he turned Beiteddine over to the Lebanese government, along with the entire art collection housed there. Today, the palace is partly occupied by the museum and partly by the presidential residence. The floor mosaics are still on view, but the entire wing which once housed archaeological objects and the ethnographic collection has been closed to the public for a number of years now.

The first batch of wall paintings from Porphyreon, counting about 153 fragments, was transferred to the Beiteddine Museum and underwent conservation treatments following the excavations of 1987. At that time, Joumblatt also brought to the Beiteddine Museum the mosaics from Porphyreon and a number of pavements from other sites. He entrusted the conservation of the mosaics to a Syrian restorer George Nahas and his team (see above, page 27). Nahas was probably also the first person to treat the wall paintings in any way, either still on site (to reinforce the paintings before transportation) or at the museum where Joumblatt organized a conservation laboratory. The lab was equipped with professional tools, solvents, reagents, and synthetic resins ordered from the United States. For the most part, however, these materials, apparently unused, are still to be seen in the now-abandoned lab. Alternatively, the work on the paintings could have been carried out sometime later by a Lebanese painter named Hamada Zaityr (Munir Atallah, personal communication). He is known to have creatively recomposed some of the ancient mosaics in the museum and to have used original tesserae from the disintegrated mosaics to create compositions imitating ancient ones. As a matter of fact, some of these, labeled as "ancient", are on view at the museum. Neither of the two were conservation professionals, and this became the cause of many of the current issues surrounding the condition of the wall paintings.

Nearby half of the fragments (72) had their back (and in some cases also the sides) trimmed with an angle grinder, in order to reduce the weight and volume of the blocks [*Figs 4-2*, *4-3*]. This action rendered the stone prone to cracking and breaking. Eight of the ashlars with more than one surface painted were cut into pieces, each piece retaining plaster from a different side of the ashlar (*Cat. 78*, *171–177*). This proved especially damaging for the six voussoirs from an arch. As result of this action, the painted face of the arch was separated from the painted intrados surface [*Fig. 4-4*]. The correlation between the six slightly trapezoidal dressed stones and the five rectangular ashlars (one is missing now) with slightly concave plastered surfaces was not immediately apparent. The feature that betrayed a possible connection between them was an otherwise unexplainable diagonal cut at one of the edges of each of these elements.

A few ashlars must have broken either during the excavations or soon after, as they were reassembled with an adhesive of some sort, most likely an epoxy resin (*Cat. 144*, *172*, *176a*). It was of a beige-milky color, opaque, and very hard. Moreover, the resin was employed in some cases to reattach plaster that had become detached from the stone support (*Cat. 94*, *100*, *110a*, *115*, *173b*, *176*, *213*) [*Fig. 4-5*]. An extreme example of such treatment, unfortunately dramatic in its results, is presented by *Cat. 213*. Despite being amply poured under the partly detached plaster, the resin failed to fill the void sufficiently and to bind the plaster to the stone support. It cracked, causing the plaster to break and fall off completely. Both the face of the ashlar and the back side of



Fig. 4-2. The back (left) and one of the sides (right) of ashlar *Cat. 30d* showing deep cuts made with an angle grinder



Fig. 4-3. Two fragments of voussoir *Cat. 174* recomposed: left, seen from the side; center, three-quarter view; right, reconstruction of voussoir shape



Fig. 4-4. Six trapezoidal faces of voussoirs and five matching, slightly concave elements from the intrados side of the voussoirs (one is missing; *Cat. 171–176*)

the surviving fragments of broken plaster are covered with the resin, which is now impossible to remove safely [*Fig. 4-5* right]. During the current conservation project, an attempt was made to reassemble the loose fragments and to reattach them to the ashlar. It proved impossible because too many of them have disintegrated over the years [see below, *Fig. 4-27*]. Finally, some of the paintings were protected with varnish, which has now yellowed and become almost completely insoluble over the course of the three decades that have passed since its application (see below, *§ 4.3*).

Unlike the floor mosaics, the wall paintings from Porphyreon were never put on display. Instead, they were stored for about two decades in the vaults underneath the presidential residence which occupies part of the palace. The blocks were stacked carelessly and suffered numerous mechanical damages, including breaking, severe cracking, and detachment of the plaster [*Fig. 4-6* top and bottom left]. Furthermore, the presidential garrison stationed in the palace probably used the vaults as a breakroom of sorts during their shifts, hence the cigarette stubs, candle wax, and coffee stains visible on some of the paintings [*Fig. 4-6* bottom right].

In 2004, Waliszewski visited the vaults together with Krzysztof Chmielewski from the Faculty of Conservation and Restoration of Works of Art of the Academy of Fine Arts in Warsaw. The wall paintings were photographed but no conservation work was possible for lack of appropriate authorization from the presidential guard. Four years later (around 2007–2008), through the efforts of DGA staff members Rana El-Eindari and Youssef El-Eid, the paintings were moved to the storage facility located in the southeastern corner of the palace. Fragments of broken plaster were collected from the floor of the vaults and stored in a plastic food container. At that time, the paintings were assigned five-digit DGA inventory numbers, and for the first time they were all photographed. Altogether, 164 fragments were recorded; about a dozen small broken fragments of stones were also collected but were not assigned inventory numbers. The photographs show that already at that time numerous blocks did not have any plaster preserved as a consequence of their deterioration during storage in the vaults.

Inside the new storage facility, the paintings were placed on top of benches made of plywood boards and separated from each other with tissue paper. This turned out to be unfortunate; the use of organic materials in conditions of very high humidity in the new storage facility resulted in the rapid growth of microorganisms.

In 2009, a preliminary conservation survey was conducted by Magdalena Szewczyk, then a student of the Faculty of Conservation and Restoration of Works of Art of the Academy of Fine Arts in Warsaw. She documented microbiological growth on the plywood boards and tissue, and in several cases, on the paintings themselves. She also recorded numerous condition issues, such as loss of cohesion of the plasters and the paint layers. Considering that her principal objective was a condition survey, she managed in the time available to disinfect the paintings and to protect the paint layer using Japanese tissue attached with polyvinyl alcohol.

In 2012, 41 fragments of wall paintings preserved on ashlars and stones discovered by the PCMA-DGA expedition during the most recent excavations were brought to Beiteddine and placed in the same storage facility. Two years later, the condition of 205 fragments kept at that time in Beiteddine was surveyed and documented by the author and a conservation plan was formulated. The conservation work took place over five years, from 2015 to 2019, every year in September and it was done concurrently with the iconographic, stylistic, and archaeometric

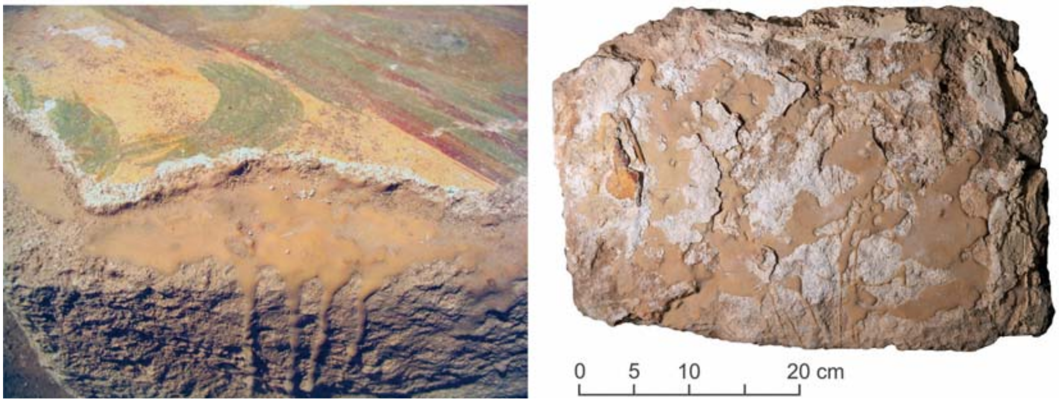


Fig. 4-5. Evidence of the use of epoxy(?) resin for reattachment of plaster to the support: left, *Cat. 94*; right, splashes of epoxy(?) resin on the face of ashlar *Cat. 213*; view in raking light



Fig. 4-6. Wall paintings from Porphyreon in the vaults of the Beiteddine Palace (2004); top, carelessly stacked blocks; note a fresh-looking break of the ashlar in the foreground; bottom left, broken and crumbled painted plaster; bottom right, remains of a burnt candle (on *Cat. 92*)

research presented elsewhere in this volume. In 2016, the last 61 stones and ashlars with remains of painted plaster were moved from Jiyeh to Beiteddine. Consequently, the Conservation Project covered all 266 fragments. After some of the broken ashlars were reassembled in the course of this work, their total number decreased to 258.

4.2 Conservation issues

4.2.1 Current storage conditions

The paintings are kept is a spacious ground-level storage room with a high vaulted ceiling and stone floor [*Fig. 4-7*]. The walls, except for the pillars, are plastered and painted. Two large windows located in the south wall of the room have wooden shutters, usually closed. Access to the storage facility is restricted to DGA employees. The temperature inside the room changes slowly due to the considerable thickness of the stone walls. For example, the average temperature registered inside the facility during work seasons in September, when the outside daytime temperature ranged from 26°C to 32°C, was usually around 21°C.

Generally, this room would have been a convenient and safe space for keeping archaeological artifacts, if not for the very high level of humidity caused by a faulty drainage system and lack of



Fig. 4-7. Storage room for the wall paintings from Porphyreon and the archaeological collection of the Beiteddine Museum in 2014. View from the entrance. In the foreground, ashlars with wall paintings arranged on top of plywood boards covered with tissue

appropriate insulation in that part of the palace. Water leakage is evident in the northeastern corner of the room; the entire east wall is damp. The storage room is equipped with an old yet functioning dehumidifier (Wood's Frostguard, model ED28-GD). Unfortunately, owing to frequent and prolonged power shortages in the museum, the instrument is rarely switched on. During the course of the Conservation Project, a hygrometer was installed in the storage room and monitored four times a day (at 9:00 and 11:00 AM, 2:00 and 5:30 PM). It showed relative humidity levels at about 85% in the mornings, right after the storage room was opened, dropping to about 45–50% by early afternoon. This drop was achieved simply by keeping the door and the two large windows open for the day. The museum staff received instructions to regularly ventilate the storage room throughout the year.

Besides the wall paintings from Porphyreon, other archaeological items are kept in this facility: pottery, glass vessels, stone steles, mosaics transferred from archaeological sites (including mosaics from Porphyreon and Chhim), Roman-period sarcophagi made of lead, and other metal objects. All of these materials, but especially the metal artifacts, glass vessels, and mineral substrates of mosaics and wall paintings, are vulnerable to such persistent moisture.

4.2.2 Biodeterioration

The high humidity levels in the storage room coupled with the presence of organic materials (plywood boards and tissue) created favorable conditions for the development of microorganisms. Szewczyk noted notable growth within a year after the paintings were moved from the vaults of the palace (around 2007–2008) to the storage facility [*Fig. 4-8:A,B*]. Fungi attacked primarily organic materials, but a few instances of their expansion to the stones and plasters were also recorded [*Fig. 4-8:C*]. The disinfection carried out by Szewczyk largely halted the biodeterioration in the period prior to the Conservation Project. Numerous colonies of sulfur-yellow and black mold were discovered on the plywood boards, the tissue paper, and directly underneath the blocks which were in contact with the plywood, but only a few instances of colonization of the stones were noted [*Fig. 4-8:D*]. Fortunately, the microorganisms did not transfer to the facing made of Japanese tissue.

Microbiological growth can cause substantial damage to wall paintings, plasters, and stones. It may be triggered by organic substances present in paint layers and plasters, introduced either with the original technique of execution or during restoration, or by organic compounds present in the dust or soil gathering on the surface of the paintings over the years (Garg, Jain, and Mishra 1995; Veneranda et al. 2017). In addition, certain species of bacteria, fungi, lichens, and algae may find appropriate nutrients supporting their growth in inorganic constituents of the plasters, mortar, or stone (Lyalikova and Petushkova 1991; Ciferri 1999; Sterflinger and Piñar 2013; Veneranda et al. 2017, with further references).

Penetration of filamentous mycelia into the porous structure of building materials leads to their mechanical disintegration and pitting of the surfaces. Furthermore, fungi accumulate moisture, while bacteria produce organic acids and alcohols, which induce chemical decomposition of mineral binders (Garg, Jain, and Mishra 1995: 263–265; Rölleke et al. 1996: 2059, 2063). Finally, microbiological growth causes disfiguring and often irreversible stain efflorescence on the painted surfaces.



Fig. 4-8. Presence of fungi: A, B – colonies of black and sulfur-yellow fungi on the tissue paper and plywood boards (underneath) on which the paintings were stored prior to 2014 (in 2009); C – colony of fungi on painted plaster (*Cat. 78*, in 2009); D – black fungi on the back of ashlar *Cat. 213*, which was in direct contact with tissue paper and plywood boards (in 2014)

4.2.3 Condition of the stones

The stones are the least vulnerable component of the wall paintings from Porphyreon, although they have still suffered substantial, chiefly mechanical damage, typically losses of small fragments (usually corners), cracking, and breaking.

The condition of particular masonry elements depends quite obviously on the physical properties of the rock material from which they are carved. *Ramleh* tends to have varying compactness and aggregate size resulting from its conglomerate and sedimentary nature (see above, *§ 3.3*), hence the anticipated significant differences in the condition of particular stones. Even so, the fragments from the excavation campaign of 1987 were in comparatively the worst condition. Some mechanical damages, done partly with bulldozers, might have occurred at the time of discovery and excavation.[1] Furthermore, the 72 masonry members trimmed with an angle grinder down to a thickness of only 8–9 cm became especially prone to cracking [see *Figs 4-2*, *4-3*]. Considering the old epoxy resin that holds some pieces together, some breakage must have occurred during the trimming (*Cat. 144*, *176a*). Several masonry elements broke during storage in the vaults of the Museum in the time from about 1987 to 2007/2008. To reiterate, 70 of the 164 stones and ashlars registered when the paintings were moved from the vaults to the current storage facility had fresh breaks. The Conservation Project was able to match and reassemble six

[1] Evidence of bulldozing was noted on the tops of the walls of the basilica (Waliszewski et al. 2008: 27).

pairs of stones with fresh breaks that had individual inventory numbers, reducing the number of registered ashlars to 158 (see below, *§ 4.6.6*). Additionally, it was possible to match the broken ashlars and stones with a number of unregistered small fragments of stones collected when the paintings were transferred from the vaults of the palace [*Fig. 4-9*].

The 102 masonry elements coming from the PCMA-DGA excavations were in much better condition, as they have not been altered in any way after the excavations. The majority of them retain their original volume and dimensions; 33 elements had missing corners or fresh breaks, which must have occurred during or after excavations. Two ashlars were reassembled from four fragments with fresh breaks (*Cat. 50*, *69*), consequently reducing the number of blocks to 100.

4.2.4 Granular disintegration of plasters and expansion of losses

Loss of cohesion of the plasters and their granular disintegration was one of the most urgent issues, one which put the entire collection of wall paintings from Porphyreon in danger and necessitated immediate conservation attention. Loss of cohesion occurs when the binder does not hold the grains of the aggregates together and they begin to fall out. This process is especially evident on the jagged edges of surviving plaster [*Fig. 4-10*]. As the edges of the plaster disintegrate, the painted area shrinks as well. This process also concerns losses and abrasions of the plaster surfaces, which expand as the disintegration proceeds. Such decomposition of the binder, leading to disintegration of the plaster, can be caused, for example, by high humidity, unfavorable environmental conditions during deposition in the ground or after unearthing (characterized by an aggressive pH or containing pollutants and water-soluble salts), or by penetration of fungal mycelia into the render's structure.

The wall paintings from Porphyreon suffered from disintegration of the plasters, both painted and plain, but not of the preparatory mortars (Types 1 and 2), which generally remained coherent, suggesting that the preparation technology of the plasters was responsible for their poor condition to a far greater extent than any external factors. The quality of materials and mistakes made in



Fig. 4-9. Unregistered small fragments of broken blocks collected when the wall paintings were transferred from the vaults to the current storage room



Fig. 4-10. Disintegration and crumbling of the painted plaster, leading to loss of painted areas (*Cat. 207*)

the preparatory stage could compromise the durability of the renders. For example, taking into consideration that construction mortars were presumably prepared by a different team of craftspeople than the plasters (see above, *§ 3.9*), it is possible that lime of varying quality was used for these two kinds of render. Furthermore—and such an explanation appears very plausible—the choice and preparation of the aggregates could have resulted in differences in mortar and plaster quality. The size and shape of the aggregate grains, the uniformity of their distribution, and the binder-aggregate ratio all influence the level of porosity of a mineral mortar (Stefanidou and Papayianni 2005; Szemerey-Kiss, Török, and Siegesmund 2013, with further references; Gutman et al. 2016: 305–307; Stefanidou 2016). The higher the porosity, the poorer the mechanical properties of the render. If the aggregates are uniform in grain size, they will mix well with the binder and be well-packed in the mortar, increasing its strength. Aggregates of varying sizes will not be as evenly distributed and tightly arranged inside the mortar, making it more porous and prone to mechanical damages. Furthermore, angular aggregates, such as crushed calcite, give harder renders than rounded grains like beach sand (Gutman et al. 2016: 305–307; Stefanidou 2016).

Since the aggregates used for the preparation of mortars and plaster from Porphyreon tend to be chiefly rounded or sub-rounded, the shape of the grains cannot explain the differences in condition between the mortars and the plaster. However, the relatively good condition of the mortars may be related to the homogeneity of grain sizes. The off-white preparatory mortar (Type 2) was made using sifted sand, with grain sizes falling within a narrow range (0.2–0.4 mm). Aggregates used for the gray mortar (Type 1) measured from 0.5 mm to 1 mm and can also be classified as uniform. Meanwhile, the aggregates found in the plaster appear in diverse sizes, ranging from 0.25 mm to 1.20 mm. Moreover, bioclasts (fragments of shells and skeletal remains of marine organisms), which are the principal type of aggregate in plaster, come in different shapes, which further hampers achieving a uniform and compact render.

Finally, samples of plaster exhibited a slightly higher participation of binder in relation to aggregate, which further increased the porosity. All of these features likely influenced the durability of the plaster, which is now incohesive, crumbly and weak, while the mortar layers remain relatively firm and in stable condition.

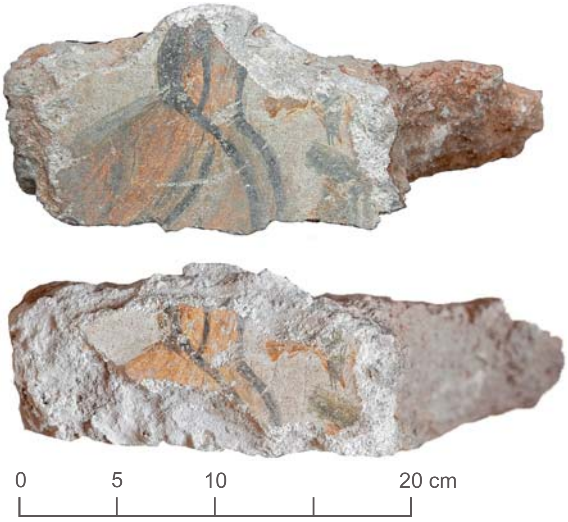
4.2.5 Detachment of plaster from the stone support

The loss of adhesion and detachment of the plaster layer from the masonry supports was noted on 54 out of 259 plastered ashlars and stones. The loss of adhesion was usually observed around the perimeter of the surviving plaster and in areas where plaster was applied directly to the stone [*Fig. 4-11* left]. Detached areas of plaster were prone to cracking, crumbling, and breaking, which led to shrinkage of the plastered and painted areas.

Photographs of wall paintings taken in 2004 in the vaults of the Beiteddine Palace show numerous cracked and detached fragments of plasters [see *Figs 4-6* bottom left, *4-27* left]. Some of them were collected and secured at the time of transfer of the paintings from the vaults to the current place of storage. During the Conservation Project, an attempt was made to reassemble and reattach them to the ashlars (see below, *§ 4.6.7*). As for the paintings unearthed by the PCMA-DGA expedition, a comparison of photographs taken soon after the discovery and during the Conservation Project demonstrated that much of the breaking off of the plaster occurred during the years that the blocks were kept in the small on-site storage room at Jiyeh [*Fig. 4-11* right].



▲ *Cat. 37b*



Cat. 31b ▶

Fig. 4-11. Loss of plaster adhesion; left, a cleavage between plaster and mortar; right, top and bottom, significant loss of plaster between discovery (2010) and transfer from the storage room in Jiyeh to the Beiteddine Museum (2016)

Plaster can detach from the support for several reasons. The internal structure may be weakened by chemical and physical erosion associated with water infiltration. A wall render, the binder of which is decomposed by chemical processes or mechanical erosion, will lose its bonding with the masonry. Another cause of detachment is the absence of preparatory mortar (true for the majority of extant wall paintings from Porphyreon) and/or insufficient wetting of the substrate before application of the plaster. An insufficiently soaked wall will absorb water from the fresh plaster, leading to rapid contraction of the render and development of micro- and macro-cracks and inter-layer detachments. This, again, facilitates infiltration of water and advances deterioration.

Another frequent cause of plaster detachment are the temperature fluctuations occurring in diurnal cycles, when a wall render is heated by direct sunlight during the day and cools during the night. This phenomenon is caused by the thermal expansion of materials (Torraca 2009: 74–76). The heated surface of plaster expands and loses its bond with the stone support, which has a slower response to the temperature (a process which could be mitigated by the presence of one or more layers of preparatory mortar). The reaction of wall renders and masonry to heating depends also on their porosity (Zeng et al. 2012). Moreover, particular crystalline and non-crystalline components of the mineral renders respond differently to heating and cooling (they have a different TEC, thermal expansion coefficient). The expansion and contraction vectors of a given mineral are not always equal. After cooling, it does not always return to its original shape and dimensions, which may cause, for example, loosening of particular grains of the mineral aggregate. Such cyclical volumetric changes of constituents of wall renders lead to cracking and detachment.

This effect of periodical heating and cooling is a common cause of deterioration of wall renders and floor mosaics in outdoor exposure. However, it is unlikely to have affected the wall paintings from Porphyreon to any greater extent, the blocks having been placed in storage soon after discovery and sheltered from direct sunlight. The more likely cause of plaster detachment is mechanical: sundry blows and micro-vibrations occurring at the time of excavations, during storage, or as a result of improper handling.

4.2.6 Losses and abrasions

Both the painted and plain plaster fragments displayed losses and surface abrasions that varied in size and distribution. While some paintings featured nearly intact surfaces, others were severely pitted and abraded. It should be noted that the granular disintegration of plasters described above also occurred within areas of surface abrasions. Generally, once the surface had been mechanically damaged, it would become prone to disintegration. Taken altogether, mechanical factors were the chief underlying cause of losses and abrasions.

4.2.7 Powdery paint layer

A paint layer loses its cohesion and becomes powdery (chalky) when the painting medium (binder) is no longer capable of holding the particles of the pigments together. This may happen when an insufficient amount of the medium was used to prepare the paint, or if the medium had disintegrated over time. Typical causes of degradation of the medium are biodeterioration (especially dangerous for organic media) and chemical deterioration of calcium carbonate (for fresco and lime-painting). Powdering caused by the decomposition of the binder usually affects vast surfaces of a wall painting, regardless of the applied colors, whereas an insufficient amount of binder in paint layers often affects only certain color parts. The latter phenomenon results from the differences in the binder requirements of particular pigments.

Each pigment has a characteristic critical pigment volume concentration (CPVC) value, which indicates the amount of binder necessary to just wet the surfaces of tightly packed individual particles of pigments and fill the interstitial spaces between them (Bierwagen 1992). Exceeding the CPVC point results in changes to paint properties, such as adhesion, resistance to moisture penetration, opacity, or gloss (Lestarquit 2016: 200). Paint formulated above the CPVC, that is, with an excess of pigment in relation to the binder, will exhibit a tendency to powder (Feller and Matous 1964: 25). The CPVC is calculated on the basis of the oil absorption (OA) of a given pigment, which is defined by either the weight or the volume of linseed oil necessary to wet and fill the interstices between the particles of 100 g of dry pigment (Lestarquit 2016: 202). Earthen pigments, the most common colors used in ancient and historic wall paintings, have a medium-to-high OA and CPVC. According to Golden Artist Colors, Inc., 100 g of raw sienna requires 35 g of linseed oil, while raw umber demands 55 g (Sands 2016). A study by Osabohien and Egboh on red earth demonstrated it has a binder-demand of 53.45 g (Osabohien and Egboh 2007: 516).[2]

Of the 236 fragments from Porphyreon retaining painted plaster, 158 exhibited a powdery paint layer. The powdering concerned chiefly areas painted with red and dark red paint, and it could be explained by an insufficient amount of binder in these paint layers [*Fig. 4-12*].

[2] However, the OA and CPVC are affected by a pigment's particle size, shape, and size homogeneity and hence may vary depending on the source of the pigment and its grinding (Lestarquit 2016: 202).



▲ *Cat. 28* ▲ *Cat. 147* ▲ *Cat. 199*

Fig. 4-12. Suffusion of red pigment on the surface of wall paintings, testifying to loss of cohesion of the paint layer

4.2.8 Surface deposits

Wall paintings from Porphyreon were covered with various kinds of secondary, unaesthetic residues, of either natural or artificial origin. Obscuring the plaster were deposits of dirt firmly adhering to the surface and by dust accumulating in the storage area over the years [*Fig. 4-13*]. Furthermore, soil and vegetal remains were caught in the cavities and interstices of the stones and plasters. No salt efflorescence was observed.

A number of fragments, chiefly those discovered in 1987 and kept for many years in the vaults of the Beiteddine Palace, were stained with various substances of artificial origin, such as wax from melted candles, ink, and coffee(?) [*Fig. 4-14*].

All of these deposits significantly disfigured the depictions, mostly by rendering them illegible and by altering the original colors.



Fig. 4-13. Removal of surface grime (*Cat. 100*): the right side of the painting before cleaning, the left side after cleaning



▲ *Cat. 198* ▲ *Cat. 52* ▲ *Cat. 92*

Fig. 4-14. Various stains on the wall paintings.
From left to right: coffee(?); ink; wax from a melted candle

4.3 Artificial coatings

Among the wall paintings coming from the excavations of 1987, 69 (57 catalog entries) out of 141 fragments that retained plaster and a paint layer had their surfaces coated with a semi-transparent substance: *Cat. 8*, *9*, *14*, *18–21*, *30*, *36*, *59*, *60*, *66*, *74*, *77–79*, *81*, *92*, *94*, *97*, *98*, *104*, *107*, *110*, *121*, *122*, *124*, *126*, *127*, *129*, *137*, *138*, *140*, *141*, *143*, *144*, *150*, *153*, *154*, *168*, *170–172*, *173b*, *174a*, *175*, *177*, *178*, *196*, *198*, *203*, *207*, *213*, *217*, *246*, *254*, *266* [*Fig. 4-15*]. The substance had evidently been applied to the majority of the most visually attractive fragments, such as depictions of inhabited scrolls, some of the jeweled crosses, birds, flowers and pomegranates set in foliage. In many cases, it coated not only the painted parts but was also spread broadly on the plain plaster. The substance, evidently used as a varnish, varied in terms of its thickness, tone, and gloss. Some paintings were covered with a very thick, dark yellow layer, whereas others had only a thin light-yellow film. Generally, the thicker the coating, the more yellow and disfiguring its color. On most of the fragments the varnish was moderately or very glossy. Two fragments (*Cat. 172*, *174a*) were coated with a matte, dark yellow, parched, exfoliating varnish [*Fig. 4-15* bottom].

The varnish must have been applied shortly after the discovery of the paintings in order to protect them from further damage. Although it has played its protective role—fragments that were varnished survived in much better condition than those that were not—it became very yellowed over the course of time; it was also extremely difficult to remove. Initial cleaning tests revealed that only toluene was able to affect the coating, but only if the coating was thin and had not yellowed that much. In such cases, the solvent would soften the varnish, forming a gel removable with a scalpel. However, the thick, much-yellowed coatings did not respond to toluene treatment. They were also too hard and glazy to be safely removed by mechanical means.

Interestingly, an artificial transparent coating was also noted after removal of surface dirt from 18 fragments coming from the most recent PCMA-DGA excavations (*Cat. 5–7*, *23*, *26*, *29*, *62*, *65*, *83a*, *108*, *139*, *147*, *164*, *165*, *166*, *188*, *243*, *259*). Since the PCMA-DGA expedition did not take any such steps, the logical assumption is that the varnish was applied at the time of the

Cat. 30a ▶

Cat. 97 ▶

Cat. 137 ▶

Cat. 143 ▶

Cat. 172 ▶

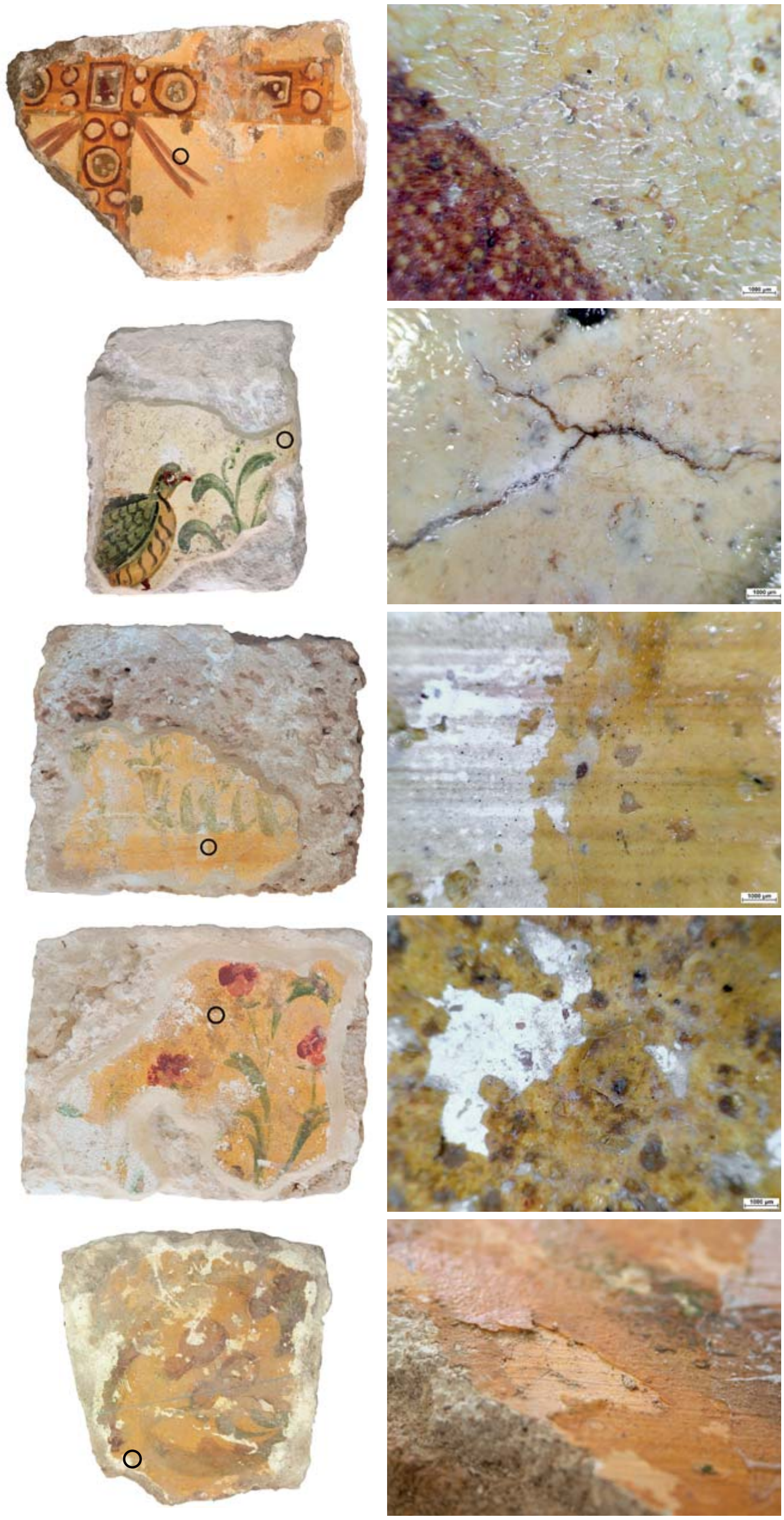
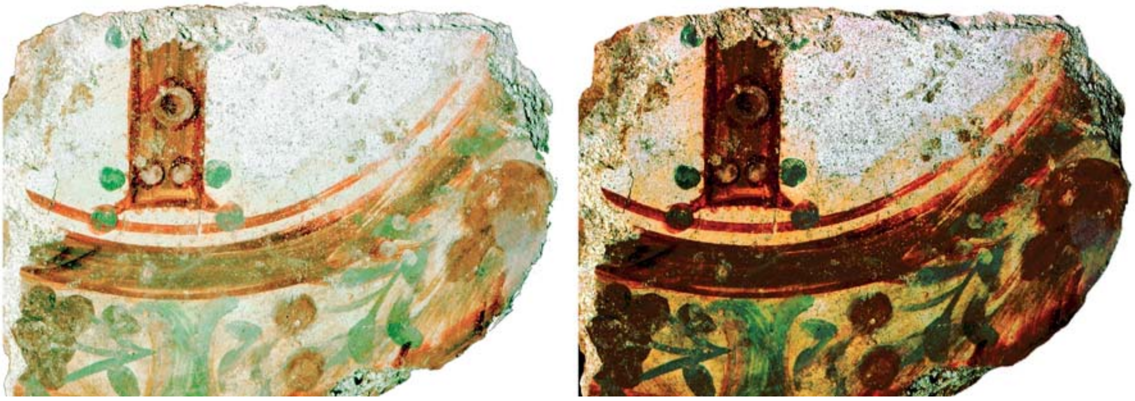


Fig. 4-15. Artificial coatings; circled area blown-up in a microphotograph on the right (*Cat. 137* – microphoto taken at the edge of cleaning test area; *Cat. 172* – thick, delaminating varnish)



▲ *Cat. 108*



▲ *Cat. 47*

Fig. 4-16. Artificial coatings: top, fragment during cleaning, showing the uncleaned surface (1), a dull, grayish, synthetic varnish revealed after removal of surface grime (2), and the surface after removal of the varnish (3); at right, the painting as documented in 1975; bottom, condition documented in a photo from 1975; at right, the same photo after adjusting contrast and saturation levels in graphic software – note yellow veil over the painted areas indicating an artificial coat of varnish

first discovery of these blocks by Saidah. Therefore, the presence of an artificial coating on these fragments confirms their provenience from secondary fill. For *Cat. 108*, this is additionally corroborated by it being captured in one of the images from 1975 [*Fig. 4-16* top right]. Furthermore, some of the archival photos from 1975 show a slight saturation of the painted areas and surface around them, proving that the varnish was applied then [*Fig. 4-16* bottom]. Notably, the same type of varnish occurs on three fragments found in 1987, suggesting that the assemblage from the 1980s contains some specimens from Saidah's excavations (*Cat. 4*, *70*, *169a*). Indeed, *Cat. 4* and *169a* are documented on Saidah's slides. It is therefore possible that some fragments first discovered in 1975 were left unburied at the site and were picked up during the successive excavation campaign of 1987 and mixed with the fragments coming from the basilica.

The varnish appearing on wall paintings discovered by Saidah and rediscovered by the PCMA-DGA expedition became grayish and dull instead of yellowing. It is moderately glossy, applied rather thinly. The only fragment that is somewhat different in this respect is *Cat. 188*, namely, one of the inscriptions flanking the passage from courtyard D11 to room D12 of residential Complex 8. The varnish in this case is much yellowed and matte.

Table 4-1. List of samples of varnish, giving corresponding catalog numbers, time of discovery, descriptions of coating and response to toluene treatment

Sample Cat.	Excavation campaign	Coating	Solubility in toluene*
Jy037 ***Cat. 108***	1975; again in 2000s	Darkened, but not yellowed, dull coating	Softens after prolonged exposure, can be gently scraped off with a scalpel
Jy038 ***Cat. 188***	1975; again in 2000s	Yellowed, matte coating, bound to support	Insoluble; too thin to attempt mechanical removal
Jy039 ***Cat. 174a***	1987	Parched and matte, flaking, dark yellow coating	Insoluble, although turns glossy (reformed?) after prolonged exposure.
Jy040 ***Cat. 97***	1987	Moderately yellow, glossy, hard coating	Becomes soft and rubbery after prolonged exposure; can be removed with a scalpel
Jy041 ***Cat. 98***	1987	Much yellowed, glossy, hard coating	Insoluble
Jy042 ***Cat. 79c***	1987	Parched and matte, dark yellow coating	Insoluble, although turns glossy (reformed?) after prolonged exposure

* The surface was rubbed with cotton swabs dipped in toluene and the action was repeated over a period of several minutes due to quick evaporation of toluene. The first response to the solvent appeared after several repetitions of the treatment.

Six samples of the varnish coming from different fragments were analyzed with Fourier transform infrared spectroscopy (FTIR) in order to identify the coating substances [*Table 4-1*].[3]

The spectra of samples Jy037 and Jy038, collected from fragments discovered by Saidah, correspond to the spectrum of n-butyl methacrylate [*Fig. 4-17:A*]. As for sample Jy039, the low intensity of the bands and their interference with bands coming from inorganic compounds hampered an unequivocal interpretation of the spectrum. It may contain proteins, natural resins, and oils, as well as polyvinyl alcohol (PVA) [*Fig. 4-17:B*]. The presence of the last substance is easily explained: PVA was used as an adhesive to attach Japanese tissue as a facing to the paintings during the brief intervention carried out by Szewczyk in 2009. The spectrum of sample Jy040 was matched with the spectra of alkyd resin and linseed oil [*Fig. 4-17:C*]. Two more samples, Jy041 and Jy042, were matched both with the spectrum of sample Jy040 and with the spectrum of alkyd resin [*Fig. 4-17:D*].

Alkyd resins are polymers made of alcohol and acid monomers (the name derives from merging the words **alc***ohol* and *ac***id**), modified with oil or fatty acids. The type and the amount of oil ("oil-length") used for alkyd production influence the properties of the final product and determine its destinations (*Oil and Colour* 1983: 75–77). The "long" oil alkyds contain 56–70% by weight of the oil or fatty acids in the finished resin and are used as media for paints and as surface finishes (Schilling, Keeney, and Learner 2004). Linseed oil, one of the most common oils used for production of long oil alkyds, is confirmed in sample Jy040 (bands at 2920, 2851, 1740, 1163 cm^{-1}) and very likely present in samples Jy041 and Jy042 (suggested by the presence of a wide band at 1740–1700 cm^{-1} with a peak at 1719 cm^{-1}). In addition, the three samples contain

[3] The FTIR analysis was carried out and interpreted by Jacek Bagniuk (Heterogeneous Reactions Kinetics Group of the Jagiellonian University).

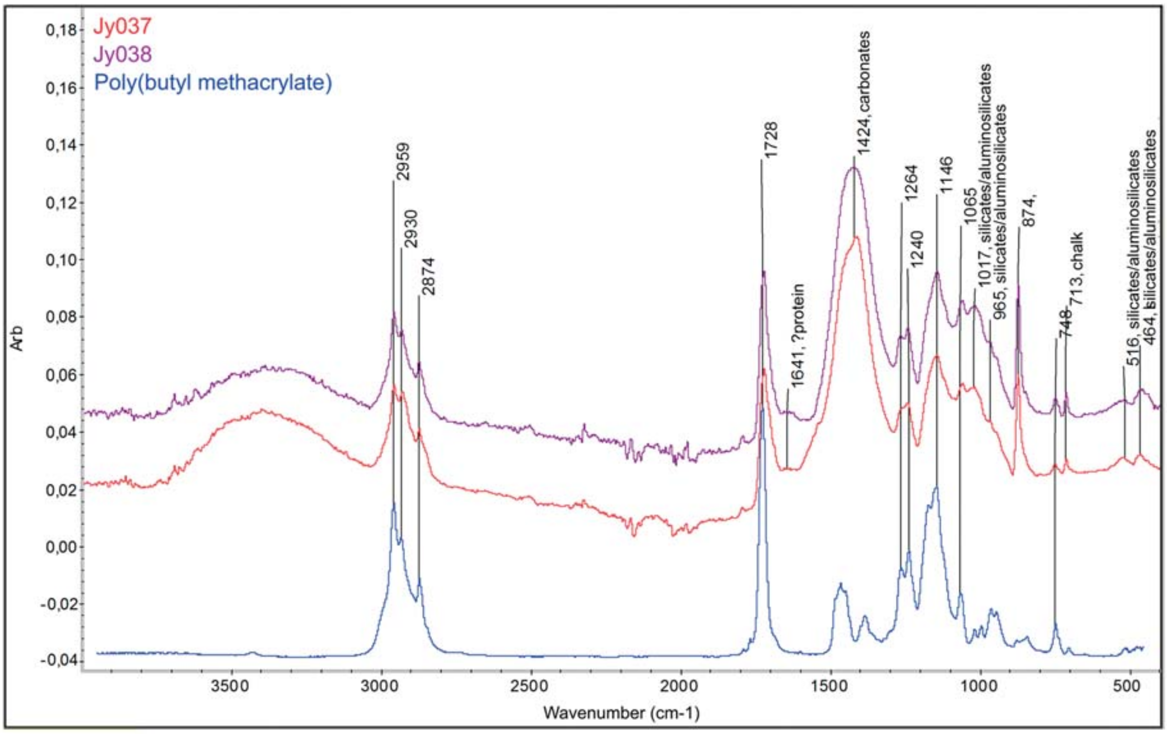


Fig. 4-17A. FTIR spectra of samples Jy037 (red) and Jy038 (purple) matched with the spectrum of n-butyl methacrylate (blue)

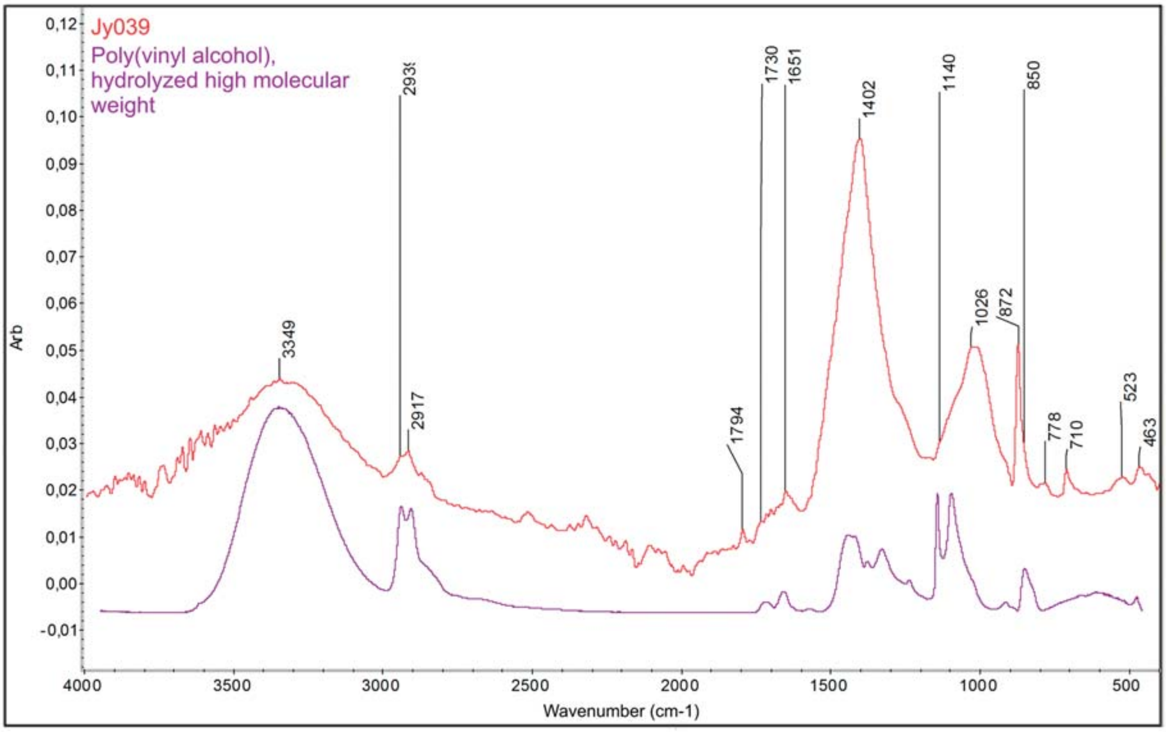


Fig. 4-17B. FTIR spectra of sample Jy039 (red) and polyvinyl alcohol (purple)

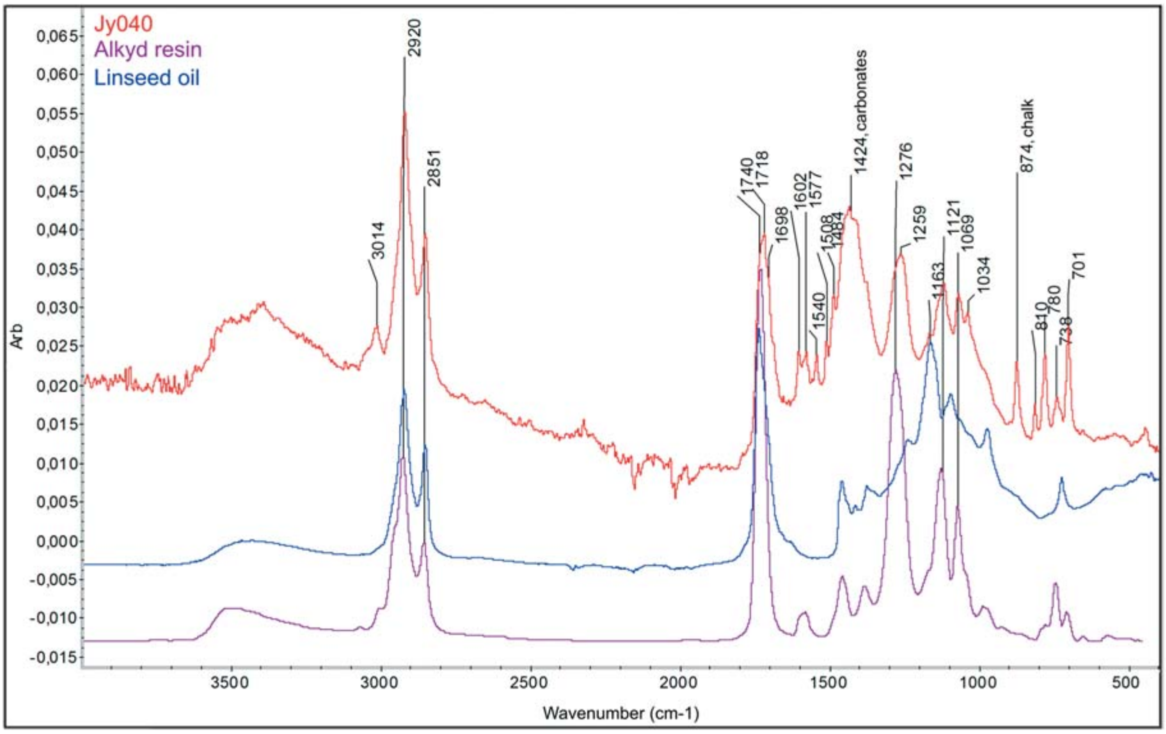


Fig. 4-17C. FTIR spectrum of sample Jy040 (red) matched with spectra of alkyd resin (purple) and linseed oil (blue)

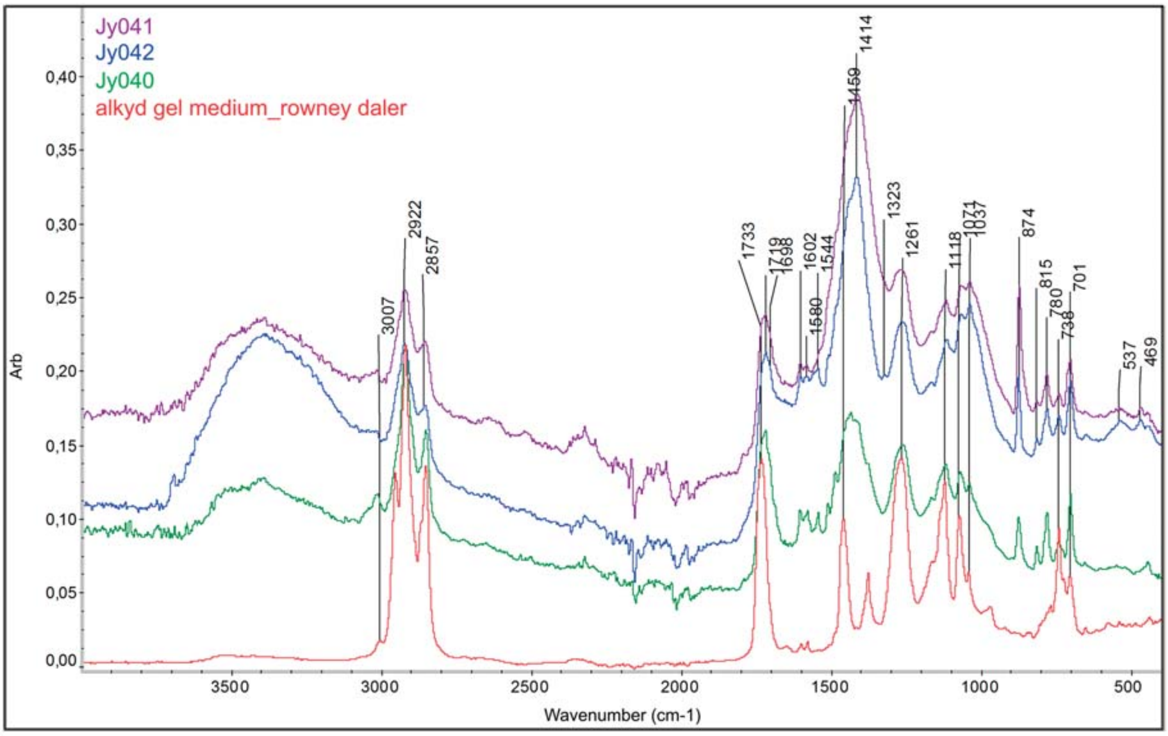


Fig. 4-17D. FTIR spectra of samples Jy041 (purple) and Jy042 (blue) matched with spectra of sample Jy040 (green) and alkyd resin (red)

a resin from the *Styrax* genus or a similar synthetic polymer, possibly an accessory ingredient of the alkyd varnish. In the latter two samples, a higher absorption at approximately 1640 cm^{-1} may point to trace quantities of proteins.

Alkyds have been used in the surface coating industry since the 1930s; they can be found both in household paints and varnishes and in industrial and heavy-duty products, such as marine paints and coatings, pavement markings, inks, architectural paints, and stoving enamels (Schilling, Keeney, and Leaner 2004; Hofland 2012). They have also been used for the production of artists' paints due to their visual similarity to traditional oil paints, coupled with good drying properties (Ploeger, Scalarone, and Chiantore 2008).

Nevertheless, the application of alkyd-based varnishes to paintings, an example of which we see in the wall paintings from Porphyreon, appears to be an awkward and misguided idea. Alkyd resins—especially the long oil kinds based on drying oils—are difficult to dissolve due to the process of cross-linking of the oil component of the resin, which occurs as they age (Erhardt, Tumosa, and Mecklenburg 2005: 147; Ploeger and Chiantore 2013: 92, 93). Therefore, removal of such a coating requires solvents that may be harmful to the underlying paint and generally poses considerable difficulties (see below, *§ 4.6.9*). Furthermore, in alkyds modified with linseed oil, the linoleic acid present in the oil tends to yellow significantly over the course of time (Ploeger, Scalarone, and Chiantore 2008). The application of alkyd varnish to the wall paintings discloses the low level of competence of the responsible restorer and seems consistent with the other treatments carried out on the assemblage discovered in 1987, namely, cutting the ashlars into pieces or using epoxy resin for reattachment of detached plasters.

The varnish used to protect wall paintings during the excavations in 1975 has a different composition and properties, and the consequences for the current conservation treatments differ as well. N-butyl methacrylate discovered in samples Jy037 and Jy038 has been employed as artists' varnish since the 1930s (Lomax and Fisher 1991: 182). Its negative properties became apparent after a quarter of a century of application in conservation practice: exposure to daylight and high temperatures caused cross-linking of the polymer, leading to its insolubility (Thomson 1957). Later, photo-aging tests revealed that n-butyl methacrylate develops 50–80% insolubility after light exposure equivalent to 50 years of daylight under an average illumination level of 50 footcandles (Lomax and Fisher 1991). The use of n-butyl methacrylate for varnishing easel paintings at the National Gallery in London was discontinued after Thomson's findings were published (Thomson 1957: 66); still, about 180 easel paintings from the National Gallery of Art at Washington, DC were coated with this varnish between the 1950s and 1980s, before it fell into disuse in the early 1990s (Lomax and Fisher 1991: 182). Currently, the use of n-butyl methacrylate in conservation as picture varnish has generally ceased, but it finds applications, for example, in bone and leather conservation as a consolidant (in combination with Paraloid B-72; Vuori and Hanson 2000: 225) or as a medium for fillers (Nieuwenhuizen 1998: 138–139). It is available under the commercial names of Acryloid/Paraloid® F-10 (Röhm & Haas), Elvacite® 2044 (DuPont), and Plexisol® 550 (Kremer). Picture varnish based on isobutyl methacrylate and n-butyl methacrylate and modified with UV stabilizers and absorbers has been offered since the 1980s by Golden Artist Colors under the general series name MSA Golden® varnishes, where MSA stands for mineral spirit-based acrylate.

Even though the progressing, aging-related insolubility of n-butyl methacrylate was determined as early as the late 1950s, its application in 1975 would not have been an anachronism. As noted above, it was still used at that time as picture varnish at the National Gallery of Art at Washington, DC. Its uses for coating wall paintings, consolidation of flaking paint layers in wall paintings, and reinforcement of plasters were not uncommon around that time (Ruggles 1973; Gerassimova et al. 1975; Gerassimova and Melnikova 1978). Furthermore, Saidah is known to have used this polymer as early as during the first seasons of excavations at Khan Khaldé in 1961 and 1962. He reports that the head of the "Laboratoires et Ateliers" of DGA provided him with a 10% solution of Bedacryl (n-buthyl metacrylate) in toluene and xylene for the consolidation of newly discovered skeletons before moving them from the site (Saidah 1966: 54).[4] Saidah apparently had a history of seeking professional advice with regard to conservation materials and he continued to use n-buthyl metacrylate for first-aid conservation during subsequent excavation campaigns, including the one at Jiyeh.

Removal of the n-butyl methacrylate varnish from the wall painting fragments was significantly easier than the removal of the alkyd varnish (see below, *§ 4.6.9*). The reburial of these painted fragments after the campaign of 1975, whether intentional or not, sheltered them from daylight and UV radiation and possibly mitigated the cross-linking process, which would normally render this copolymer insoluble. Considerable insolubility was noted only in the case of *Cat. 188*, from which sample Jy038 was taken. However, this could be explained by the fact that at the time of the discovery this ashlar was still incorporated in the wall, so it might have remained exposed to direct sunlight for many years before it tumbled and was reburied in naturally accumulating dirt.

The very concept of varnishing wall paintings, regardless of the actual choice of materials, requires brief comment. Varnishing is a common and traditional practice in the realm of easel paintings. Varnish not only protects a painting surface but enhances visual properties, such as color saturation or surface sheen. The earliest varnishes used in medieval Europe consisted of hard resins, such as sandarac, boiled in oil; alternatively, egg white could also be used (Bomford et al. 2002: 182–183). Since then, numerous recipes for the preparation of varnishes from different kinds of natural resins, dissolved in oils or volatile solvents, and more recently, based on synthetic polymers, have been developed and used by artists and restorers. In contrast to the established tradition of varnishing easel paintings, no such practice has developed for wall paintings. Technical investigations do not sufficiently support the hypothesis about the application of hot wax to the surface of finished Roman-period wall paintings to render them saturated and resistant to weathering.[5] Vitruvius and Pliny the Elder speak only of application of wax melted in oil to parts of wall paintings executed with the use of cinnabar in order to avoid its darkening (Vitruvius, *TB*, VII, 9.3; Pliny, *NH*, XXXIII, 40; Ling 1991: 209). However, instances of the employment of varnishes to wall paintings as a conservation measure are known from the 18th- and 19th-century excavations at Pompeii, Stabiae, and Herculaneum (Moormann 1991: 90, 94–96). Application of

[4] Saidah wrongly describes Bedacryl as polymethyl methacrylate (which is plexiglass).

[5] The hypothesis was put forward by Selim Augusti (1950) as an explanation of the brilliant surface sheen observed on many Roman-period wall paintings.

protective coatings copied the practice of treating easel paintings and was an intuitive response to the problem of "fading" of wall paintings that had been abruptly exposed to outdoor environmental conditions after centuries of deposition underground.

Modern wall painting conservation practice provides consolidation of paint layers only in cases of the loss of their cohesion or adhesion to the support. In such instances, the consolidant is not applied like a varnish, that is, as a film on top of the paint layer, but as an adhesive introduced underneath delaminated flakes or as a thin solution which penetrates the powdery paint layer and binds its particles together. In contrast to varnishes which change the visual qualities of an easel painting, consolidants used in wall painting conservation should not alter their appearance. Furthermore, they are employed in very diluted solutions in order to avoid the formation of an impenetrable film, which could induce further damages or hamper future conservation treatments.

4.4 Effect of site location and deposition conditions on painting preservation

Despite the numerous deterioration processes that affected the wall paintings from Porphyreon, their state of preservation is quite exceptional when compared to remains of wall paintings coming from other Late Antique sites in the Eastern Mediterranean. For example, at Chhim, located about 8 km east of Porphyreon, just a few small patches of wall paintings have survived on the walls of an early Christian basilica, and a handful of fragments were recovered from the debris. Altogether, they were too small and too few to identify any decorative designs. As a matter of fact, the most severe damage to the wall paintings from Porphyreon occurred after their discovery. In the case of the assemblage unearthed in 1987, numerous damages result from the excavation method and the following improper pseudo-conservation treatments with the use of faulty materials. For the wall paintings found during the most recent campaigns, the principal damage is related to the disintegration of plasters that occurred in the onsite storage room. This disintegration is evident when photographs of wall paintings taken after the discovery are compared with images made a few years later [see *Fig. 4-11* right]. These observations lead to the assumption that prior to their unearthing the wall paintings were generally safe.

The key to understanding the phenomenon of the relatively good state of preservation of the wall paintings discovered in Porphyreon may be the nature of the environment in which they were buried and the location of the site in coastal dunes. Obviously, a coastal environment is considered to be one of the harshest for porous mineral materials, such as stone and plaster. Archaeological sites located along the coast are exposed to sea breeze, which is generated by different air pressures over bodies of water and land resulting from their different heat capacities. The breeze carries marine aerosol containing sodium chloride ($NaCl$), as well as other chemical compounds and elements such as sulfates, nitrates, carbon, magnesium, and potassium (Prokos 2005: 21–22). The water-soluble salts that penetrate the structure of a porous material may cause substantial mechanical damages when they begin to crystallize and, in consequence, increase their dimensions. Furthermore, grains of sand transported with the wind cause abrasion of architectural structures and decorative surfaces, leading to their mechanical erosion (Prokos 2005: 44). Finally, sandy soils have low density and do not protect archaeological remains from deterioration caused by the infiltration of water and diffusion of atmospheric gases (Pedelì and Pulga 2013: 13).

However, there are also some advantages of a coastal setting for an archaeological site possibly counterbalancing the unfavorable factors. Sand driven by wind accumulates relatively fast on the border between land and sea. This means that a coastal settlement can be concealed under dunes soon after its abandonment, thus becoming sheltered from various weathering factors, such as insolation, aeolian erosion (caused by the wind), or direct rainfall. With inland sites, the process of accumulation of soil deposits sufficient to cover an abandoned site requires a longer time, during which various environmental factors continue to affect the archaeological remains. Furthermore, fine mineral particles of sand easily fill all nooks and crannies of an archaeological structure, providing extra cushioning protection.

Sandy soil is an inhospitable environment for plant growth, except for weeds and shrubs, so it is unsuitable for agriculture. Such conditions eliminate two other important factors which are often causes of deterioration on archaeological sites: erosion caused by roots of large plants and damages resulting from agricultural activity, such as plowing. Finally, the greater the depth of deposition of an archaeological structure, the more impermeable the soil, and hence less aggressive influence of atmospheric gases and fluctuations of temperature and humidity.

Remains of wall paintings surviving on the east wall of the basilica at Porphyreon, at a height of about 4 m, constantly exposed to sea breeze, marine aerosols, solar radiation, and abrasive, sand-carrying wind, are barely legible at this point (*Cat. 44*), while many of the fragments recovered from the debris are in a relatively sound condition. It is possible that despite certain disadvantages, the specific environment, in which the wall paintings from Porphyreon were buried, contributed to their relatively good state of preservation. Well-preserved wall paintings were found at Caesarea Maritima, another important coastal site about 150 km south of Porphyreon. Excavations brought to light a number of murals from the hippodrome, baths, and warehouse complexes (Horton 1996; Avner 1999; Patrich 1999). Farther south, on the same Eastern Mediterranean coast, excavations on a beach in Gaza revealed a Hellenistic residence decorated with wall paintings in exceptional condition (mid-3rd century BCE; Monier Karamakhuzhi, Guilbaud, and Broillet-Ramjoué 2012). Even farther, on the coast of Cyrenaica, well-preserved Roman-period wall paintings were discovered in the House of Leukaktios (late 2nd to 3rd century CE; Żelazowski 2012).

Two samples of plaster, one coming from a fallen block discovered in 1987 (*Cat. 247*, sample Jy043) and one taken from the east wall of the basilica (sample Jy044), were analyzed to determine the salt content [*Tables 4-2, 4-3*]. The differences turned out insignificant. Both contained

Table 4-2. Salt content in two samples of plaster expressed in mg/l

	NO_3^-	NO_2^-	Cl^-	PO_4^{3-}	SO_4^{2-}
Jy043	15	0	0	2	25
Jy044	0	0	2	5	25

Table 4-3. Salt content in two samples of plaster expressed in percentage of weight

	NO_3^-	NO_2^-	Cl^-	PO_4^{3-}	SO_4^{2-}	Total
Jy043	1.5	0	0	0.2	2.5	4.2
Jy044	0	0	0.2	0.5	2.5	3.2

sulfates, likely related to the presence of gypsum also detected in the microchemical tests of mortars and plasters (see above, *§ 3.6.1*). The presence of phosphates and nitrates in the samples can be explained by nitrogen and phosphorus release from the decomposition of organic matter (Kibblewhite, Tóth, and Hermann 2015: 253; Kolb 2017: 16–18). However, sample Jy044 contains 0.2% (by weight) chloride, likely associated with marine-originating halite (NaCl) that penetrated the plaster due to its exposure to an outdoor environment. Sample Jy043, coming from an ashlar that was buried until its discovery, does not contain any chloride. The fact is that there are no noticeable differences in the state of preservation between these two samples that could be associated with the presence of sodium chloride. Nevertheless, we should bear in mind that sample Jy044 was collected from the lower part of the basilica wall, which means that it was covered by debris for most of the time and was exposed to environmental conditions only a few decades ago. The quantity of NaCl it absorbed so far is relatively low, but with the passage of time, prolonged exposure would likely lead to the deterioration of the plaster.

4.5 Objectives of the Conservation Project

The Conservation Project was of a rescue character, hence its principal objective was to halt the deterioration processes that had already severely affected the condition of the paintings since their discovery, and to reinforce the paintings to ensure their long-term survival. For that reason, the most urgent treatments involved stabilization and reinforcement of disintegrating and detached plasters. This was achieved by restoring their cohesion, reattaching them to the stone supports, and applying mortar bands and fills. Actions related to improving the storage conditions were also aimed at mitigating deterioration processes resulting from high humidity levels and the presence of microorganisms.

Treatments aiming to stabilize and reinforce the paintings were a prerequisite for the second stage of works, which was focused on improving the legibility of the depictions, necessary for the iconographic and stylistic study [***Figs 4-18:A,B,C***]. This was achieved by the removal of disfiguring dirt deposits and old varnishes. The latter treatment was especially crucial because the advancing cross-linking of the polymers would have ultimately rendered the coatings completely irremovable. Furthermore, the appearance of the paintings was significantly altered by the yellow color of the alkyd resin, while the glossiness of their faces was discordant with their original, matte aspect. The final stage of the conservation treatments involved inpainting of the fragments that represented considerable iconographical and aesthetic value or required further improvement of their legibility.




▲ *Cat. 30a* (2008) (2018)




▲ *Cat. 59a* (2014) (2018)




▲ *Cat. 60* (2008) (2018)




▲ *Cat. 66* (2015) (2018)

Fig. 4-18A. Selected fragments before and after treatment (left and right, respectively)





▲ *Cat. 77* (2008) (2019)





▲ *Cat. 79b* (2014) (2019)





▲ *Cat. 94* (2014) (2018)





▲ *Cat. 100* (2009) (2018)

Fig. 4-18B. Selected fragments before and after treatment (left and right, respectively)




▲ *Cat. 110b* (2014) (2018)




▲ *Cat. 144* (2014) (2018)




▲ *Cat. 154* (2014) (2018)




▲ *Cat. 175b* (2008) (2018)

Fig. 4-18C. Selected fragments before and after treatment (left and right, respectively)

4.6 Conservation treatments

The conservation treatments described below were carried out over the course of five campaigns (every September in the following years: 2015, 2016, 2017, 2018, and 2019) and took a total of 88 workdays, or 99 assuming that 11 days of a condition survey carried out in September 2014 are included. Treatment was either full range or limited to just two or three basic interventions (to stabilize the condition and guarantee preservation) depending on the state of preservation and iconographic value of a given fragment. A full list of treatments carried out on particular fragments can be found under individual entries in the Catalog.

4.6.1 Disinfection and improvement of storage conditions

At the beginning and end of each campaign of conservation work all of the fragments of wall paintings were disinfected with a 5% ethanol solution of Lichenicida 464 (Bresciani). The biocide was applied with a sprinkler to the faces and sides of the stones and ashlars [*Fig. 4-19* top left]. The plywood boards and tissue paper infested by fungi were removed from the storage area, leaving the stones directly on the stone floor of the room [*Fig. 4-19* top right and bottom].

A hygrometer was installed in the storage room and was monitored daily during the course of work. The log indicated a significant drop in humidity levels within the first four hours after the opening of the door and the two large windows in the south wall of the storage room. A strong smell of mold present in the room at the beginning of each season of work would disappear completely after a week of regular airing. Assuming that the museum staff would open the windows daily as instructed (except on humid and rainy days), the room would be aired properly (keeping the door open creates draft which speeds up ventilation of the area), improving significantly the climate inside the storage room. It is a pity that despite these instructions the storage is mostly kept shut throughout the year. Also, chemical disinfection should be repeated as a preventive measure at regular intervals.

The humidity problem caused by water infiltration in the southeastern corner of the storage room can be eliminated by repairs to the drainage system and improved insulation of the building, but this requires an architectural and engineering project that was beyond the scope of the work described here.

4.6.2 Reattachment of detached plasters

Reattachment of detached plasters was achieved by applying an adhesive (7–10% water dispersion of Primal AC-33), introduced underneath the plaster with a syringe through existing cracks or at the edges of the plaster [*Fig. 4-20*]. It was preceded by the application of ethanol (45%) used to reduce surface tension inside the cleavages and to facilitate penetration of the adhesive. In the case of extensive detachments, the procedure was carried out in stages, with breaks between subsequent applications in order to allow the adhesive to fill the cleavages and set. None of the detachments were deep enough to require the employment of liquid injection mortar such as Ledan TB. No injections were carried out on fragments where the adhesion was only slightly weakened along the perimeter of the extant plaster. It was assumed that the application of mortar bands to the



Fig. 4-19. Disinfection and improvement of storage conditions: top left, disinfection of the entire collection of paintings carried out at the beginning and end of each work season; top right, removal of one of the plywood boards on which the paintings were stored prior to 2014 – note the moist stains produced by fungi on the board and floor; bottom, current arrangement of stones and ashlars directly on the floor of the storage facility

edges of the plaster would suffice to reinforce them. This way, no synthetic adhesive was introduced where not absolutely necessary.

Reattachment of the plasters was performed on a total of 35 fragments (*Cat. 12*, *23*, *24*, *28*, *37b*, *42*, *45b*, *48–50*, *57*, *69*, *77*, *92*, *94*, *97*, *98*, *108*, *112*, *118–120*, *124*, *136*, *142–144*, *151*, *152*, *204b*, *207*, *210*, *227*, *237*, *238*). After the plaster was reattached, the Japanese tissue applied to some of the fragments by Szewczyk in 2009 was removed using demineralized water.



Fig. 4-20. Reattachment of detached plaster by means of injections: left, *Cat. 97*; right, *Cat. 37b*; note the moist stain on the surface of the plaster indicating migration of the adhesive inside the cleavage



Fig. 4-21. Consolidation of disintegrated edges of plaster using Primal WS-24 (*Cat. 94*)



Fig. 4-22. Application of mortar bands: left, *Cat. 98*; right, *Cat. 211*

4.6.3 Consolidation of disintegrated plaster edges

The granular disintegration of the plaster edges was in urgent need of attention. In order to halt this rapidly progressing deterioration process, a 2% water dispersion of Primal WS-24 acrylic resin was applied to the edges and abraded surfaces of the plasters. This kind of adhesive is characterized by excellent properties of penetration into porous structures, so it can bind grains together and prevent the mortar from disintegrating.

The resin was brushed onto the edges and abraded surfaces of plasters, following application of ethanol (45%) used to reduce surface tension and to facilitate penetration by the adhesive [*Fig. 4-21*]. Consolidation with Primal WS-24 was carried out on all stones and ashlars which had retained plaster on their faces, whether painted or plain.

4.6.4 Removal of epoxy resin

Eleven blocks were stained with splashes of a hard synthetic resin, most likely epoxy, used in the past to glue the stones together and to reattach detached plasters (*Cat. 21*, *94*, *100*, *110a*, *115*, *144*, *172*, *173b*, *176a+176b*, *213*). The resin was removed mechanically using small chisels and a hammer. On *Cat. 94*, the process had to be synchronized with reattachment of detached edges of the plaster to the support wherever the resin had coated them. Epoxy resin was left only on the completely deteriorated *Cat. 213* as testimony of past treatments.

4.6.5 Application of mortar bands and infilling losses of plaster

Once the detached plasters were reattached to the stone support and their disintegrating edges consolidated, they were further protected with mortar bands. The mortar was prepared with Keim NHL Kalkputz restoration mortar and sand in a 1:1 ratio, and a small addition of 5% water dispersion of Primal AC-33. The fragility and poor cohesion of the original plasters made it necessary to use a light mortar formula of this kind. Were the mortar too strong, it would have made any future attempts to remove the bands harmful to the plaster. The selected formula produces mortar bands that are firm enough to protect the plaster, but easy to remove if necessary. In order to achieve a color of the mortar bands matching the overall tonality of the stones, small quantities of natural earthen pigments (i.e., light ocher and burnt umber) were added.

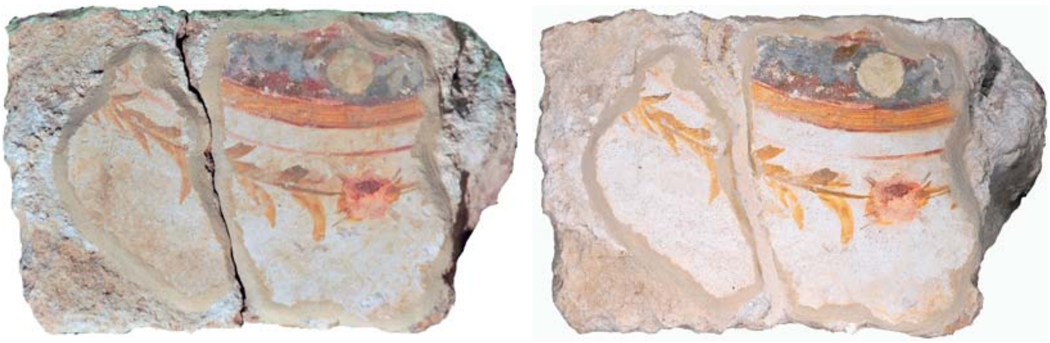
The bands were applied around the edges of all plasters, including plain fragments [*Fig. 4-22*].[6] Large losses were infilled with the same type of mortar. The fills were applied *sotto livello*, about 1 mm below the surface of the original plaster; their surfaces were left slightly rough.

[6] The author would like to thank Youssef el-Eid whose assistance in the application of mortar bands significantly contributed to finishing this treatment on time.

4.6.6 Reassembling broken stones

A number of connections between broken ashlars and fragments were found in the course of the work:

- *Cat. 4* reassembled with three small pieces without inventory numbers;
- *Cat. 50* reassembled from two elements with separate inventory numbers [*Fig. 4-23* top];
- *Cat. 54a* restorable from two elements with separate inventory numbers;
- *Cat. 69* reassembled from two elements with separate inventory numbers;
- *Cat. 110b* restorable from two elements with separate inventory numbers and two small pieces without inventory numbers;
- *Cat. 127* reassembled from two elements with separate inventory numbers;
- *Cat. 138* reassembled from two elements with separate inventory numbers and three small pieces without inventory numbers [*Fig. 4-23* bottom];
- *Cat. 174a* reassembled with a small piece without inventory number;
- *Cat. 175a* reassembled with a small piece without inventory number;
- *Cat. 176a* reassembled from two elements with separate inventory numbers;
- *Cat. 219* restorable from two elements with separate inventory numbers and a small piece without inventory number;
- *Cat. 254* reassembled with a small piece without inventory number.



▲ *Cat. 50*



▲ *Cat. 138*

Fig. 4-23. Ashlars *Cat. 50* and *Cat. 138* before (left) and after reassembly, application of new mortar bands, and filling the joints with mortar (right)

All of the breaks were "fresh", meaning that they had occurred at the time of excavation or in storage.

The surfaces of the breaks were carefully cleaned of dust. Next, holes were drilled in matching elements to accommodate fiberglass rods intended as a means to reinforce the bond [*Fig. 4-24* top left and right]. The number, length, and diameter of the rods depended on the volume and weight of the matching elements. A two-component epoxy resin for stone conservation was used as an adhesive (Akepox 2040 by Akemi). The resin was inserted into the drilled holes and applied to the rods and the surface of the breaks [*Fig. 4-24* bottom left]. The matching elements were rejoined and put under pressure for 24 hours [*Fig. 4-24* bottom right]. Any excess of epoxy resin oozing from the joints was immediately cleaned with acetone. For the stone elements that could be reassembled from several pieces, this procedure was carried out in stages. Joints visible on the face of a reassembled ashlar were filled with mortar tinted with pigments to match the color of the stones. Where necessary, new mortar bands or fills were applied to the plasters [*Fig. 4-23* top and bottom right].

The two fragments of ashlar *Cat. 219* were not reassembled because of their condition. The stone was a very grainy and crumbly *ramleh* and its back had been trimmed down to a thickness of just about 9 cm. Drilling holes for fiberglass rods would have led most likely to the fissuring or even breaking of the stone. At the same time, gluing the pieces together without the rod



Fig. 4-24. Reassembling broken stones (*Cat. 50*): top left, drilling holes in one of the two fragments of the ashlar; top right, fiberglass rods inserted in the holes; bottom left, application of epoxy resin to the fiberglass rods, drilled holes, and surfaces of the breaks of the two fragments of ashlar; bottom right, rejoining the two fragments



Fig. 4-25. Successive stages of matching and reintegrating fragments of broken plaster (*Cat. 137*): top left, matching fragments; top right, applying a thin layer of mortar to the stone; bottom left, setting fragments in mortar; bottom right, applying mortar bands around reintegrated plaster

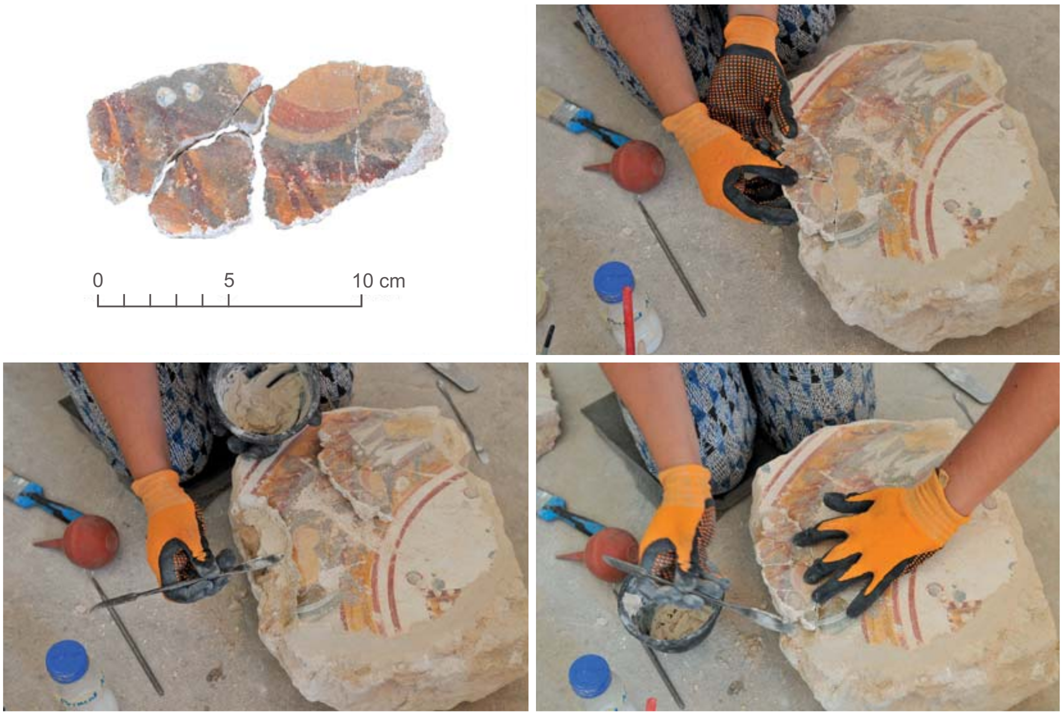


Fig. 4-26. Successive stages of matching and reintegrating fragments of broken plaster (*Cat. 45b*): top left, the fragments; top right, matching the fragments; bottom left, applying a thin layer of mortar to the stone; bottom right, setting the fragments in the mortar and applying mortar bands

reinforcement would not have been sufficient to keep the two parts together. The two fragments of *Cat. 54a* were also not reassembled, because they were trimmed down differently, one of them being significantly thinner than the other. With a third of the ashlar missing, the short joint between two fragments of different thicknesses would have failed to provide a stable bond. A part of ashlar *Cat. 110b* was reassembled from three small fragments and could then be matched with the larger part of the same ashlar. Nevertheless, it was not rejoined because both fragments were too thin (about 6–7 cm thick) to drill holes in them and the joining surface was insufficient to sustain the bond.

4.6.7 Reintegrating fragments of broken plaster

A number of fragments of broken plaster were collected from the floor of the vaults of the Beiteddine Museum (see above) when the wall paintings were transferred to the storage room around 2007–2008. It was possible to reintegrate some of them with some of the paintings. For example, a few fragments of white background and a fragment depicting leaves was matched with *Cat. 97*. A large fragment of the white background and a fragment of a green leaf were rejoined with *Cat. 98*. A number of plaster fragments were found and reintegrated with *Cat. 137*. This fragment initially appeared to have depicted only green plants growing from a yellow strip of ground. However, the reintegrated plaster in the upper left part of the ashlar face most likely showed an animal reclining among the plants [*Fig. 4-25*]. Furthermore, seven fragments of broken plaster allowed a significant portion of the foliage and fruit on *Cat. 45b* to be restored [*Fig. 4-26*]. Plaster fragments were also matched with *Cat. 72*, *175a*, and *207*. The matching fragments of plaster were first reattached to the stone by setting them in a thin layer of Keim NHL Kalkputz mortar spread on the stone. When the mortar was set, mortar bands were applied along the edges of the reintegrated fragments of plaster to secure them.

An effort was made to reassemble the numerous loose fragments of painted plaster belonging to *Cat. 213*. Photographic documentation made in the vaults of the Beiteddine Palace in 2004 shows this ashlar with broken fragments of plaster lying on top of it [*Fig. 4-27* left]. The loose fragments were distinctive due to their maroon-khaki color palette and a thick layer of varnish. Some were reassembled, but since many were missing, it proved impossible to restore the composition or to position the reassembled, larger fragments on the ashlar.



Fig. 4-27. Painted plaster from *Cat. 213*: left, condition in 2004, during storage in the vaults of the Beiteddine Palace; right, partly reassembled fragments

4.6.8 Surface cleaning

Different methods were employed to remove surface grime, which in most of the cases consisted of soil deposits and dust accumulated on the paintings during deposition in the ground and during storage. It was easy to remove with erasers and fiberglass pencils, and by gentle cleaning with distilled water applied on a cotton swab [*Fig. 4-28* top and bottom left]. Areas of the paint layer were cleaned very gently and to a limited extent, while the plain white plaster was treated slightly more thoroughly. In several instances, the paint layer could not be cleaned because of a complete loss of cohesion. In such cases, only the unpainted areas were gently cleaned.

A few blocks were stained with various substances, such as very compact, mortar-like incrustations, wax, coffee, and ink. Hard incrustations were softened with water and then removed mechanically with scalpels. Coffee stains could be wiped away with swabs dipped in distilled water, while ink and wax were removed with the use of toluene-based paint thinner [*Fig. 4-28* top and bottom right]. It was not possible to extract the wax from the plaster structure completely, so the colors in the stained area remain artificially saturated and somewhat glossy.

4.6.9 Removal of the varnishes

The removal of the n-butyl methacrylate and alkyd varnishes was one of the most challenging tasks in the Conservation Project. Solvent tests were carried out in order to determine the method of cleaning, but limited access to chemicals on the spot resulted in only a few solvents being



Fig. 4-28. Surface cleaning: left top and bottom, removal of surface grime using cotton swabs dipped in distilled water (*Cat. 100* and *Cat. 149*); top right, removal of an ink stain from *Cat. 52*; bottom right, removal of wax from *Cat. 92*

tested, among them: ethanol, acetone, toluene, dimethyloformamide (DMF), and paint thinner acquired in a local hardware store.

Studies of the solubility of n-butyl methacrylate varnish carried out on 31 paintings from the National Gallery of Art in Washington, DC, had revealed that the varnish could be removed with the use of cyclohexane, toluene, a toluene-cyclohexane mixture, or a toluene-acetone mixture (Lomax and Fisher 1990: 187). Application of these solvents or their mixtures caused immediate formation of a gel. Wall paintings from Porphyreon coated with n-butyl methacrylate could be cleaned with toluene, although the varnish was not as responsive to the solvent as the varnishes in the study mentioned above. A cotton swab dipped in toluene had to be rolled over the surface for several minutes before the gel was formed. To speed up this procedure, cotton pads dipped in toluene were applied to the surface of the varnish and covered with polyethylene foil in order to slow down the evaporation. After several minutes the compresses were removed and the jellified varnish could be scraped off gently with a scalpel. The cleaning concerned altogether 20 fragments covered with n-butyl methacrylate varnish during Saidah's excavations (*Cat. 4–7*, *23*, *26*, *29*, *62*, *65*, *70*, *83a*, *108*, *139*, *147*, *164–166*, *169a*, *243*, *259*). The varnish on *Cat. 188* was left uncleaned as evidence of materials and procedures used during Saidah's excavations.

The described cleaning method was also efficient with *Cat. 94* and *Cat. 97*, which were coated with an alkyd varnish. This efficiency seems to have been somehow related to the fact that the varnish on these two fragments had not yellowed much, so it was likely less aged and hence still soluble to some extent [*Fig. 4-29*]. Toluene was not as effective with the thickly applied, very yellowed alkyd varnish. Neither was it possible to remove the coating by mechanical means alone due to the fragility of the paint layer and the extreme hardness of the coating.



Fig. 4-29 Using a scalpel to scrape off from the surface alkyd varnish turned to gel after prolonged exposure to toluene (*Cat. 97*)

Long oil alkyd resins, such as the one used as varnish at Porphyreon, are soluble in non-polar, aliphatic hydrocarbon solvents, such as mineral spirits (Schilling, Keeney, and Learner 2004; Ploeger and Chiantore 2013: 90). None of the solvents available at Beiteddine or their different mixtures was effective, even after prolonged exposure. As a last resort, a paint thinner, purchased from a local hardware store was tested and gave positive results, although it also required a prolonged time to affect the varnish.

The varnish removal procedure involved application of cotton compresses soaked in solvent to the painting surface, wrapping the stone tightly in polyethylene foil to slow down evaporation, pressing the compress down with a heavy object and leaving it for about 15–45 minutes.[7] After that time the varnish would become considerably softened and form a gel that could be gently removed with a scalpel blade [*Fig. 4-30*]. In some cases, the varnish would peel off so easily and thoroughly that it was enough to swipe the peels off with a brush [*Fig. 4-31*]. For especially thick coatings, the procedure was repeated once or twice. Because the organic solvent could not affect the mineral binder of the paint layer, the cleaning procedure was safe for the paintings. Varnish was completely removed from a total of 62 fragments: *Cat. 8*, *14*, *19–21*, *30, 36*, *59a*, *60*, *66*, *74*, *78*, *79*, *81*, *92*, *94*, *97*, *98*, *104*, *107*, *110*, *121*, *122*, *124*, *126*, *127*, *129*, *137*, *138*, *140*, *141*, *143*, *144*, *150*, *153*, *154*, *168*, *170*, *171*, *172*, *173b*, *174a*, *175*, *177*, *178*, *196*, *198*, *203*, *207*, *217*, *254*.

Cat. 213 could not be cleaned because of its poor condition. Complete removal of the varnish turned out impossible also with regard to *Cat. 9*, *18*, *59b*, and *77*. *Cat. 9* and *18* exhibit very abraded and rough surfaces. Caught in the interstices of the surface, the varnish adhered firmly to the support and even when softened, could not be removed in its entirety. Similarly, most of the varnish on *Cat. 77* was removed, although some bits remained in the interstices of the texture of the thickly applied paint layer. On *Cat. 59b*, the varnish was extremely thick and barely responsive to the solvent treatment even after multiple applications, and the poor condition of the plaster and the paint layer did not allow for prolonged treatment. Most of the varnish was removed, although it still remains in some small areas. The varnish was also noted on *Cat. 246* (thin, only slightly yellowed coating) and *Cat. 266*. These fragments, which do not retain any representations, were left uncleaned as evidence of past means and procedures applied to the assemblage of paintings coming from the 1987 excavations.

The cleaning of *Cat. 14*, *19*, *66*, *74*, *171b*, *175b*, and *243* posed considerable difficulties. Even though these fragments displayed a moderately yellowed, thin coating, its removal required multiple applications of the solvent and prolonged treatment. Pending further, in-depth studies, the following working theory may be offered concerning the removability of varnish from these specimens. Photoaging of coatings based on some of the natural resins has been demonstrated to occur only in a surface layer of the coating, measuring either less than 8 μm (de la Rie 1988: 54) or 7–9 μm (Theodorakopoulos and Zafiropulos 2003: 220s). If a coating is thick, its lower layers will be less affected by aging processes and will thus exhibit better solubility than the surface layers. However, if a coating is applied thinly, the aging will occur throughout its thickness. This mechanism could account for differences in solubility of the varnish on particular fragments of the wall paintings. In the thickly coated surfaces, the phenomenon of aging and progressing

[7] A gelling agent brought from Poland was used in later campaigns and the solvent was applied as gel compresses.



Fig. 4-30. Successive stages of removal of alkyd varnish from the surface of *Cat. 30d*: top left, application of cotton pads soaked in the solvent; top right, wrapping the ashlar in polyethylene foil; center left, putting pressure on the compresses; center right, unwrapping the ashlar and scraping off the varnish with a scalpel; bottom, close-up of the painting surface during the removal of the alkyd varnish



▲ *Cat. 177* ▼ *Cat. 8*



Fig. 4-31. Close-up of the painting surface of two fragments showing delamination of the alkyd varnish after treatment with the solvent; bottom, view in raking light

insolubility of both the alkyd and the drying oil components in the varnish was most advanced in the surface layers. Unable to affect the surface layers, the solvent could have nonetheless penetrated them, swelling and softening the lower layers of the varnish, and thus weakening its adherence to the substrate. In many cases, the applied solvent caused the varnish to contract and peel from the surface but did not dissolve it. Since the varnish on these seven fragments was thinly applied, the thinness of the film would have allowed the aging to occur throughout the layer, making it more resistant to the solvent than in the case of thick coatings.

Removal of the yellowed varnish revealed the original colors of the paintings, which was essential for the iconographic and stylistic studies. The colors show cooler tones, and the plaster backgrounds are white. Furthermore, given the minimal solubility of the substance, it was very likely that if not removed now, the varnish could have become utterly insoluble within a few years.

A sample of the paint thinner (Jy045) used in the process of varnish removal was identified by means of a FTIR analysis. It turned out to be a mixture of toluene and 2-butoxyethanol, with a trace presence of polyvinyl acetate occurring either as contaminant or added intentionally as a thickener [*Fig. 4-32*]. According to specifications from chemical companies, 2-butoxyethanol exhibits a strong solvency for a number of synthetic resins, including alkyd (*DOW* 2018: 5). It would be interesting to test whether the alkyd coating from the wall paintings at Porphyreon could indeed be removed with pure 2-butoxyethanol or a mixture with toluene would be needed. However, considering the impossibility of importing this substance to Lebanon, the question

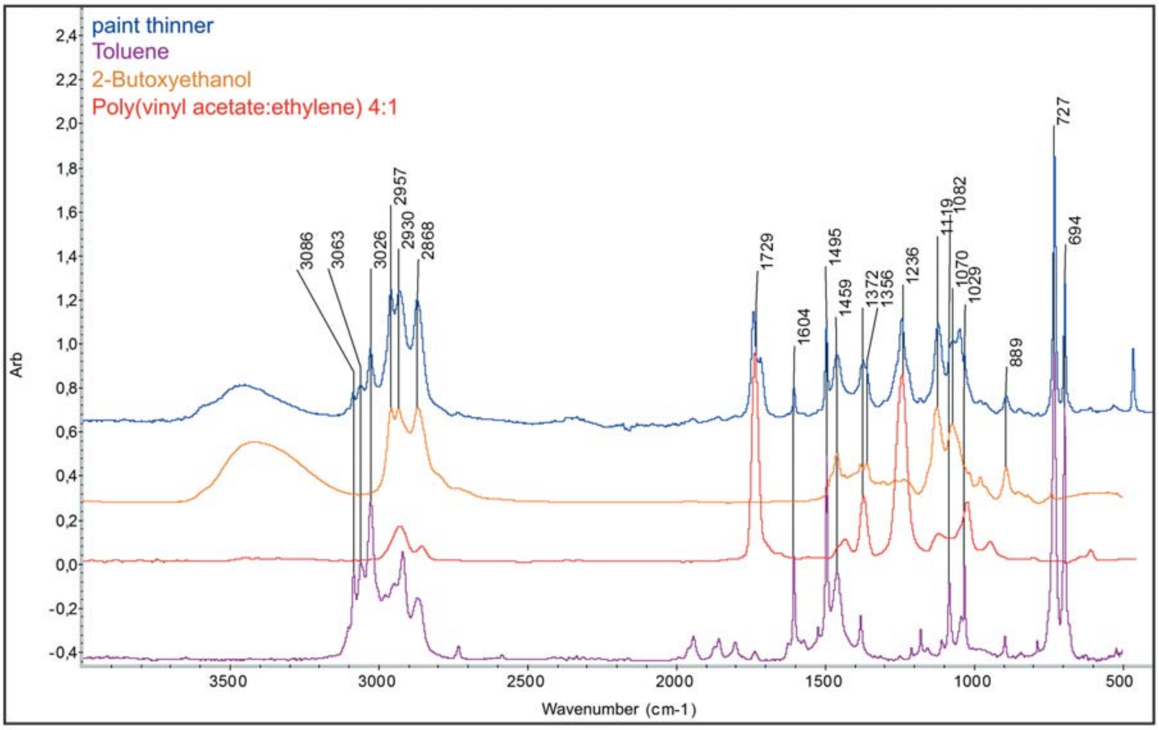


Fig. 4-32. FTIR spectra of the paint thinner (blue), toluene (purple), 2-butoxyethanol (yellow), and polyvinyl acetate (red)

will have to remain open. Furthermore, 2-butoxyethanol is often used in the paint and varnish industry as a surfactant (a "surface active agent"). Surfactants decrease surface tension between different substances (e.g., between two liquids or between a liquid and a solid), meaning they may improve the wetting properties of a substance. Finally, 2-butoxyethanol is, in contrast to toluene, relatively low-volatile, which means that its presence in the paint thinner slows down its evaporation, allowing it to act longer on the substrate. All of these features (solvency for alkyds, good wetting properties, and slow evaporation rate) account for the fact that in most of the cases this particular paint thinner was capable of affecting the varnish.

4.6.10 Consolidation of powdery paint layers

Areas of powdery paint layers were consolidated with a 2% solution of Paraloid B-72 in toluene applied with a brush [*Fig. 4-33*]. On the most powdery parts of the paintings, the consolidant was applied 2–3 times to achieve proper cohesion. Altogether, 158 fragments required consolidation of the paint layer, chiefly in the red parts.



Fig. 4-33. Consolidation of powdery paint (*Cat. 35*)

4.6.11 Inpainting

Inpainting of the losses to the paint layer was carried out on 58 selected fragments: *Cat. 5*, *6*, *8*, *11*, *24*, *26*, *30*, *31*, *35*, *37a*, *38*, *54*, *59*, *60*, *77–79*, *94*, *96*, *100*, *104*, *110*, *112*, *115*, *118*, *120*, *121*, *138*, *140*, *144*, *151*, *152–155*, *164*, *170–172*, *173b*, *174*, *175*. The main objective of the inpainting was to improve the legibility of the fragments and to restore their visual integrity. The principal criterion when choosing fragments for inpainting was their attractiveness for potential future exhibition in the Beiteddine Museum. Therefore, relatively complete representations, and representations that consist of more than one fragment, were inpainted, e.g., *Cat. 30*, *59*, *94*, *110*, *170–172*, *174*, *175*. In addition, several depictions of fauna and flora were inpainted in order to improve their legibility and thus, facilitate their iconographic interpretation, e.g., *Cat. 104*, *112*, *115*, *118*, *120*, *121*, *140*, *151*, *155*.



Fig. 4-34. Infilling losses: top, application of gesso (*Cat. 171a*); center left, removal of excess gesso and adjusting the surface of the fill to match the texture of the surrounding original (*Cat. 171a*); bottom left and right, inpainting fragments *Cat. 60*, *151*, and *152*

First, shallow losses in the plaster were infilled with gesso made of chalk and a 10% water dispersion of Primal AC-33 [*Fig. 4-34* top]. The texture of the fills was adjusted to match the texture of the surrounding original surface [*Fig. 4-34* center left]. Next, the most visually displeasing losses in the paint layer were inpainted with paints prepared from 7% water dispersion of Primal AC-33 and dry pigments to ensure full reversibility [*Fig. 4-34* bottom left and right].

4.6.12 List of applied materials

All conservation supplies used during the Conservation Project were imported from Poland, except for solvents, sand, and accessories such as cotton or sponges.

- Lichenicida 464 (by Bresciani)
- Keim NHL Kalkputz Fein
- Keim NHL Kalkputz Grob
- Sand, washed and dried
- Paraloid B-72
- Primal AC-33
- Primal WS-24
- Akepox 2040 (by Akemi)
- Fiberglass rods
- Carbogel gelling agent
- Toluene
- Paint thinner based on toluene and 2-butoxyethanol
- Acetone
- Ethanol
- Distilled water
- Dry pigments

4.7 Photographic documentation

All stages of the treatment were documented descriptively and photographed with a Nikon D300s reflex digital camera equipped with Nikkor 17-55 mm, f/2.8 AF-S ED lenses. Frequent power shortages in the Museum necessitated the purchase of two battery-powered XT-160 II LED lamps for the final photographic documentation of the paintings. The lamps and the camera were mounted on photographic tripods, ensuring mobility [*Fig. 4-35*]. The LED lamps also allowed creating photographic documentation of the paintings in raking light, which was particularly useful for the examination of execution technique and paint handling.



Fig. 4-35. Setup used to photograph fragments of wall paintings

Chapter 5

READING THE FRAGMENTS: IDENTIFYING WALL PAINTING ICONOGRAPHY

5.1 Study approach

The individual depictions featured on the fragments of wall paintings from Porphyreon need to be identified and interpreted before embarking on a discussion of the potential iconographic programs in juxtaposition with descriptions of wall decorations recorded in written sources, and the possible contexts and architectural settings of particular types of decoration (for this see below, Chapter 6). With this in mind the representations on the painted fragments were grouped by type, according to the following iconographic division distinguished specifically for this assemblage:

(1) crosses,
(2) geometric motifs,
(3) human figures,
(4) animals,
(5) vegetal motifs,
(6) inhabited scrolls,
(7) monochrome red genre(?) scenes, and
(8) painted inscriptions.

Such iconographic divisions are obviously highly artificial and are assumed for the sake of convenience. After all, many of the fragments fall under more than one category, such as the fragments of red crosses accompanied by inscriptions, birds adoring crosses, or animals represented among plants. Fragments of depictions of inhabited scrolls are grouped separately because they constitute an established and recognizable iconographic motif comprising both vegetal and animalistic elements. Also, the supposed genre scenes feature depictions of both humans and animals, but they have been grouped separately because of their monochrome, easily recognizable, cursory style of painting.

The fragmentary nature of many of the depictions called for a study of comparanda in order to confirm the identification. Nonetheless, the surviving archaeological evidence from the Eastern Mediterranean did not always suffice to ensure geographically and chronologically close parallels. Hence, comparanda from other areas of the Mediterranean, such as Greece and Italy, and in some cases even beyond, were also considered. Similarly, in terms of the time of execution of the cited parallels, it turned out necessary to refer also to both earlier and later works of art in order to provide sufficient comparative material. A list of relevant comparanda appears in *Table 5-1* found at the end of this chapter.

The foremost corpus of parallels from the Eastern Mediterranean are the funerary paintings, both pagan and Christian; one can add to this a few surviving remains of Late Antique wall paintings and wall mosaics from non-sepulchral contexts. Further sources of comparanda are the 5th–

6th century monuments from Greece (Thessaloniki) and Italy (chiefly Ravenna). References to catacomb painting from the Italian peninsula are rarely made in this study, despite their being one of the hallmarks of early Christian mural art. The main reason is that the subjects the catacombs are primarily known for, that is to say, various representations of Old and New Testament figures, are not attested in the wall paintings from Porphyreon. The few depictions of human figures that can be found here are too fragmentary to be associated with any of the biblical subjects from the catacombs. At the same time, other, neutral motifs which occur in catacomb painting, such as flowers or birds, can easily be found in the sepulchral art of the Eastern Mediterranean as well, so it was not necessary to seek out Italian examples. The deficiency of human representations in Porphyreon is another reason behind the relatively few references to wall paintings from Egyptian monasteries, such as Bawit, Saqqara, or Sohag, where figural decoration constitutes the core of the decorative programs. However, Late Antique wall paintings from Egypt present some useful comparanda for representations of crosses and non-representational patterns.

The surviving wall decorations, whether from the East or from the West, did not suffice for an iconographic study of many of the motifs found on fragments from Porphyreon, hence the survey of mosaic pavements from the provinces of Palaestina, Syria, and Arabia dating from the 4th to the 8th centuries. These turned out to be an invaluable, and sometimes the only source of visual reference, helping to identify the painted representations from Porphyreon. The corpus of comparanda was also supplemented by examples from the minor arts. For example, important parallels for geometric motifs and depictions of birds can be found in illuminated manuscripts from the 6th and 7th centuries. In some cases, textiles, metalwork, and stone carvings were also a source of comparative material.

The resulting corpus of comparanda [see *Table 5-1*], covering various periods and areas, as well as various media, appears spotty and incoherent at first, but it actually highlights some important phenomena characterizing Late Antique art. On the one hand, the comparanda found in Graeco-Roman art reveal the classical origins of many of the discussed iconographic motifs. On the other hand, parallels from various corners of the Mediterranean testify to the universality of some of the subjects and iconographic formulas. The recurrence of certain motifs across various arts, such as wall paintings, mosaics, textiles, or illuminated manuscripts, is evidence of iconographic cross-fertilization in these media, and of the circulation of models.

The iconography of many of the fragments escaped identification because of the poor state of preservation. These fragments, including also inventoried stones which today retain only plain plaster or no plaster at all (*Cat. 213–287*), are presented as a separate group at the end (see below, *§ 5.10*).

5.2 Crosses

Depictions of crosses are one of the most frequently occurring motifs in the wall paintings from Porphyreon, counting 87 fragments (or 75 individual representations). They are either simple red crosses with the letters *alpha* and *omega* placed beneath the horizontal bar, or more elaborate jeweled crosses. The latter may be set upon decorative bases, adored by birds, or enclosed in medallions.

5.2.1 Simple red crosses

Catalog numbers

1–29, see also *187–190*, *192* for crosses accompanying inscriptions (*§ 5.9*)

Both the residential district (Sectors D and E) and Basilica Q yielded fragments of wall paintings depicting simple red crosses. Three such depictions, two of which are accompanied by painted inscriptions, were found *in situ* on walls of the ground level rooms in the residential district (*Cat. 1*, *187*, *188*) [see above, *Fig. 2-14*].

Not one such depiction has been found complete. Only two fragments are preserved well enough to show that the crosses were of the "Latin" type, that is, with the lower vertical member visibly longer than the three other members (*Cat. 2*, *7*). Particular crosses differ in size. For example, the horizontal member of the cross seen on *Cat. 7* is 22 cm wide, while that of the cross on *Cat. 9* measures 37 cm [*Fig. 5-1*].

Many of the fragments retain the letters *alpha* and *omega* or their parts (*Cat. 2*, *4*, *11–19*). In all cases, the letters seem to have been located below the horizontal bars. The letters refer to the words from the Book of Revelation, "'I am the *Alpha* and the *Omega*,' says the Lord God, 'who is, and who was, and who is to come, the Almighty'" (Rev. 1:8) and "I am the *Alpha* and the *Omega*, the First and the Last, the Beginning and the End" (Rev. 22:13).[1]

As noted above, some of the crosses were accompanied by inscriptions, either laudatory formulas and invocations to God or verses of the Psalms (*Cat. 187–190*, *192*; see below, *§ 5.9*). Inscription *Cat. 188*, which reads ἐν τούτῳ νικᾷ, "In this [you shall] conquer", and inscription *Cat. 190*, πιστῶν φυ[λακτήριον?], "protection of the faithful", specifically refer to the depictions of crosses placed above them.

Despite their overall simplicity, particular crosses differ in details. Members have flared ends (e.g., *Cat. 2*, *7*) with several variations of simple decoration: many of the fragments feature a pair of knobs (*Cat. 1*, *3*, *8–11*, *20*, *22–24*, *26*, *187–189*), or a pair of circles (*Cat. 27*, *190*) at the terminals of each member. Some have additional "curls" next to the knobs (e.g., *Cat. 192*), or decoration consisting of a few spontaneous brushstrokes (*Cat. 4*). Furthermore, different kinds of diagonal rays emanate from the intersection of the cross members, for example, in the shape of a long narrow lancet ending with a red dot (*Cat. 3*, *8*) or variations of a trefoil (*Cat. 1*, *2*, *4*, *6*, *9*). One cross was placed most likely inside a red wreath but was deprived of the *alpha* and *omega* or any of the kinds of decoration described above (*Cat. 7*). On one fragment there is a schematically rendered bird adoring the cross (*Cat. 10*).

[1] All translations of passages from the Old and New Testaments are according to the New International Version, unless stated otherwise.

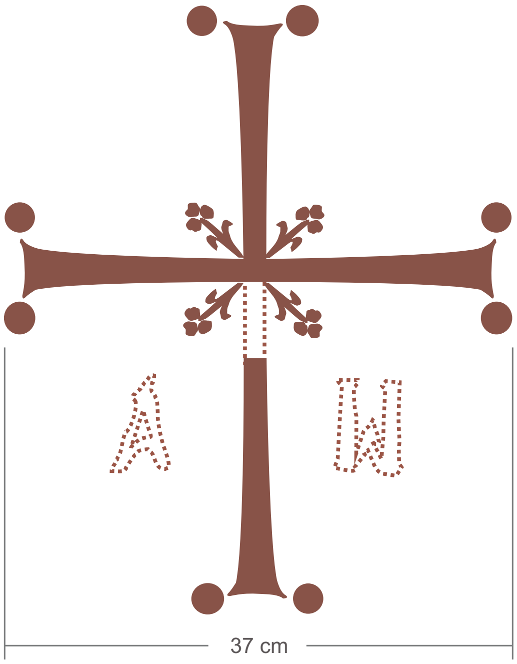


Fig. 5-1. Reconstruction of a red cross (*Cat. 9*)



Fig. 5-2. Bronze cross, allegedly found at Porphyreon during Roger Saidah's excavation of the residential district (now at the Beiteddine Museum); 6th/7th century



Fig. 5-3. Red cross with decorative knobs and the letters *alpha* and *omega*, flanked by two clumps of plants; wall painting; Western Baths at Beth Shean/Scythopolis; redone multiple times on subsequent layers of whitewash, prior to quake-related destruction in 749

All of the crosses are painted in dark red against a white background. In most instances, the brushwork appears quick and confident. The paint seems to have been applied in a single, thick layer. Even though red may be understood as an allusion to the blood and sacrifice of Christ, it should be kept in mind that the red pigment was the most common and inexpensive color available to ancient painters. Used against a white plaster background, it created a pleasing and legible color combination, and for that reason it was also the most common color used for painted inscriptions.[2]

Simple red crosses similar to those from Porphyreon are a common motif in early Christian sepulchral painting [*Table 5-1:1–5*]. A few surviving examples from non-sepulchral contexts include a representation of a red cross placed atop a simplified image of rivers of Paradise(?) on a plastered column in the presbytery of the Sanctuary of Lot at Deir ʻAin Abata (6th/7th century; Politis 2012: 369, Pl. 44), a red cross surrounded by clumps of green plants in a niche in the Western Baths at Beth Shean/Scythopolis (Saradi 2006: 330) [*Fig. 5-3*], and fragments of a red cross and Greek letters found in one of the rooms of the West Acropolis Mansion at Madaba (mid-6th to mid-8th century; Foran 2007, 116, 118, Fig. 4.7–9; see also two examples from Ephesus: *Table 5-1:6, 7*).

Their simple form was also adapted in metal processional crosses of the period [*Table 5-1:8, 9*], including one that was allegedly discovered at Porphyreon.[3] The cross has flared, relatively wide members, a small round container for the holy relics located at the intersection of the members, and eyelets attached under the horizontal bar for suspension of the letters *alpha* and *omega* (Waliszewski, Juchniewicz, and Gwiazda 2012: 437) [*Fig. 5-2*].

5.2.2 Jeweled crosses

Catalog numbers

30–43 for fragments without medallions or too fragmentary to determine whether they were enclosed in medallions; *44–75* for fragments of jeweled crosses in medallions and fragments of medallions; see also *99*, a depiction of a bird facing a medallion (*§ 5.5.1*)

A vast majority of cross depictions from the basilica and houses of Porphyreon are painted imitations of gold crosses studded with precious stones (*crux gemmata*). Some of them were depicted inside medallions decorated with various patterns.

The crosses represent the "Latin" type. Their members are much wider than in the simple red crosses. Jeweled crosses that are not enclosed in medallions generally tend to have straight members (e.g., *Cat. 32*, *39*), whereas those depicted inside medallions have slightly flared terminals (e.g., *Cat. 45*). Many of the fragments preserve the letters *alpha* and *omega* below the horizontal bar.

Most of the crosses were painted with yellow or orange-yellow color imitating gold and bordered by dark red or gray contours. Only one cross is painted in pink and dark red hues (*Cat. 54a*).

[2] Minium and red ocher, the red pigments used for painting and enhancing carved inscriptions, were sometimes called *rubrica* (Pliny, *NH* XXXIII, 40, XXXV, 14), from this derives the term *letterae rubricatae* (Bruun and Edmondson 2014: 127).

[3] The cross, currently stored in the Beiteddine Museum, is believed to come from Saidah's excavations in 1975. Wartime damage to the records of the Directorate General of Antiquities have made this provenience uncertain.

Colorful gems of various shapes were represented on top of the solid golden tone. Large ovals and rectangles are the two major types of gems, with smaller white circles probably meant to imitate pearls. All of these decorative elements are highly stylized and schematic. The gems and pearls are arranged on the crosses in various configurations; the most typical arrangement, however, involves large oval or rectangular gems alternating with pairs of pearls (e.g., *Cat. 30*, *33*). Other variants include rhombi (*Cat. 36*, *54a*), X-shaped elements and chevrons (e.g., *Cat. 32*, *39*), circles alone (*Cat. 43*), and fine, tear-shaped gems (*Cat. 37b*). In one case, the artist allowed himself a flight of fancy and filled the cross with dark red, pink, white, and green waves instead of jewels (*Cat. 63*).

All of the crosses have decorative knobs on the terminals of their members. Additionally, some of them had their contours decorated with dabs of white paint, plausibly intended to imitate pearls (e.g., *Cat. 35*, *45a*). The cross represented on *Cat. 37* has small red flowers growing diagonally from the intersection of its members, and red roundels adjacent to the edges of all of the bars. *Cat. 34* shows green rays with gray contours emanating from the middle of the cross, *Cat. 63* has lancet-shaped green rays, while the cross depicted on *Cat. 30* has double red rays.

The crosses and their decoration are rendered with varying skill and attention to details. For example, *Cat. 42* is executed in a very sloppy manner, almost unrecognizable as a jeweled cross, while *Cat. 45a* was painted with much care to detail. Furthermore, the color palette ranges from dichromic, like in the case of *Cat. 42* and *Cat. 43*, to more complex color combinations involving yellow, green, white, gray, and dark red, as seen on *Cat. 35*.

The crosses that are not enclosed in medallions were painted against a white background. Two of them were set on decorative bases (*Cat. 30*, *31*; the latter shows only the lowermost terminal of the cross). Both of these bases are similar in form: they consist of an elliptical surface set on top of what seems to be a wide trapezoidal support of some kind. The bases are decorated with red and green strokes of paint which are difficult to interpret. They are too shapeless and featureless to be imitations of jewels, but they could represent flowers or leaves. Plants surround the base of the cross on *Cat. 30*. It is possible that also *Cat. 41* represents the base of a jeweled cross. If so, it would consist of a yellow mount partly covered with green leaves. Similarly, the elliptical shape visible next to the fragmentary representation of a bird on *Cat. 108* may be a simple base.

A cross, the lowermost part of which is represented on *Cat. 31*, was flanked by two clumps of plants and two partridges. The birds were depicted with raised heads, pecking on the plants that grow between them and the cross. A representation of a bird facing a cross appears also on *Cat. 33*. In this case, however, the bird is depicted immediately next to the lower vertical member of the cross. *Cat. 99* features a partridge facing a medallion, which may have contained a cross.

Last but not least, the crosses on *Cat. 32* and *37b* seem to be surrounded by simple floral decoration. On *Cat. 32*, these decorations are limited to small, red, stylized plants rising from a red horizontal line running below the cross. Meanwhile, *Cat. 37b* shows a few long, slender green leaves and a fragment of a red and pink flower.

The motif of a bejeweled cross first appears in the dream of Emperor Constantine in which he is commanded by Christ to make a likeness of the cross that he saw in his first vision before the battle against Maxentius. According to Eusebius, the emperor called “the workers in gold and precious stones” to make such an object and then issued a command for similar crosses to be carried at the head of his armies (*Vita Constantini*, I, 29–31). The anonymous *Brevarius de Hierosolyma* (late 5th/early 6th century) speaks of a gold gem-studded cross erected on Golgotha

(Jensen 2017: 100–101). It could have been a monumental golden, jeweled cross said to have been mounted there by Theodosius II (r. 408–450) in the early 5th century. Furthermore, a semi-legendary account of the construction and furnishing of the Hagia Sophia speaks of a cross on the ambo which "weighed a hundred pounds of gold and had pendants of rubies and pear-shaped pearls" (quoted after Mango 1986: 100), and it records five other crosses made of gold and decorated with various precious stones, funded by Justinian (*Narratio de S. Sophia,* 21, 24).

Listed among the generous donations of Ravenna's Bishop Maximianus (499–556) was a staurotheke (a reliquary containing fragments of the True Cross) in the shape of a great gold cross adorned with pearls, aquamarines, amethysts, carnelians, and emeralds (Agnellus, *De Maximiano*, 80). Probably the finest surviving example of such a cross is the richly decorated processional cross and staurotheke given to the people of Rome by Justin II (r. 565–574; Pace, Guido, and Radiciotti 2009: 4). The *Crux Vaticana* is silver-gilt and has agates, emeralds, alabasters, rock crystals, and pearls set in gold along all edges of the verso of the cross. Four jeweled pendilia hang from its arms, and a crown of 12 pearls surrounds a small round case for the relics of the Holy Cross located at the intersection of the cross members.

Images of such jeweled crosses were frequently reproduced in different media of both the monumental and minor arts. The earliest representations date to the mid- to late 4th century when they appeared on clay lamps (Jensen 2017: 102) and sarcophagi (e.g., see Deichmann 1967: Nos 224, 933). The earliest surviving image of a jeweled cross in monumental art is featured in the apse of Santa Pudenziana in Rome where it is depicted on Golgotha above a representation of Christ and the apostles (approximately 400; James 2017: Fig. 65).

Several painted representations of a *crux gemmata* come from Eastern Mediterranean sites. For example, two schematically rendered, jeweled crosses flanked a depiction of the deceased (also interpreted as the Virgin) above the entrance to the loculus of tomb complex XXXI at the necropolis of Tyre (Chéhab 1985: 620, Pl. CXXIX).[4] Also in Tyre, a jeweled cross represented on a mount with clumps of plants and accompanied by a funerary inscription adorned the façade of Tomb 838 (Rey-Coquais 1977: 41–42, Pl. LVI.1). A niche located on the east wall of a hypogeum at Homs/Emesa contained the depiction of a jeweled cross with pendilia, while a medallion with another jeweled cross was placed above the niche (Du Mesnil du Buisson and Mouterde 1929) [*Fig. 5-4* left].[5] Examples from non-sepulchral settings include crosses painted in the suburban baths and a warehouse in Caesarea (Horton 1996: 179, Fig. 2; Patrich 1999: 78) [*Fig. 5-4* right] and two fragmentary depictions of jeweled crosses adored by birds from the church at Zahrani (Chéhab 1957: 99) [*Fig. 5-5*].[6] More painted examples are known from Egypt and Italy [*Table 5-1:10–13*]; one may add jeweled crosses depicted on floor mosaics to this corpus of comparanda [*Table 5-1:14–16*, *57*].[7]

[4] Maurice Chéhab (1978: 161) dated the Late Antique monuments of the necropolis of Tyre from the second quarter of the 3rd to the first quarter of the 4th century.

[5] The painted epitaphs from the hypogeum include dates between 459 and 514.

[6] The floor mosaics in the church date from the late 4th century to 541; the latter date is given by a mosaic inscription in the narthex.

[7] An edict issued by Theodosius in 427 forbade the representation of crosses on floors in order to protect the holy symbol from being trodden on. However, the significant number of floor mosaics with depictions of crosses that postdate the edict, as well as the renewal of the prohibition at the Ecumenical Council in Trulo (691), indicate that the edict was not very effective (Habas 2015; see *Table 5-1:14–19*).

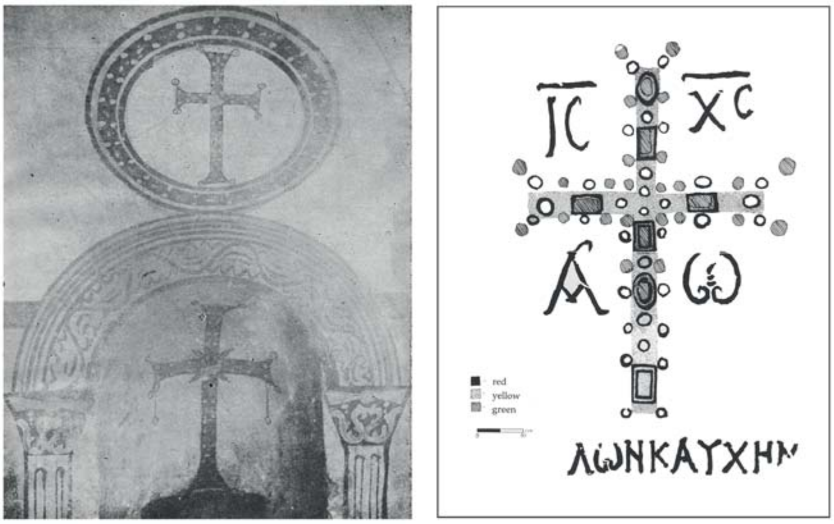


Fig. 5-4. Wall painting depictions of jeweled crosses: left, from the east wall of a hypogeum at Homs/ Emesa; 5th–6th century; right, from a warehouse at Caesarea; 6th century (tracing)

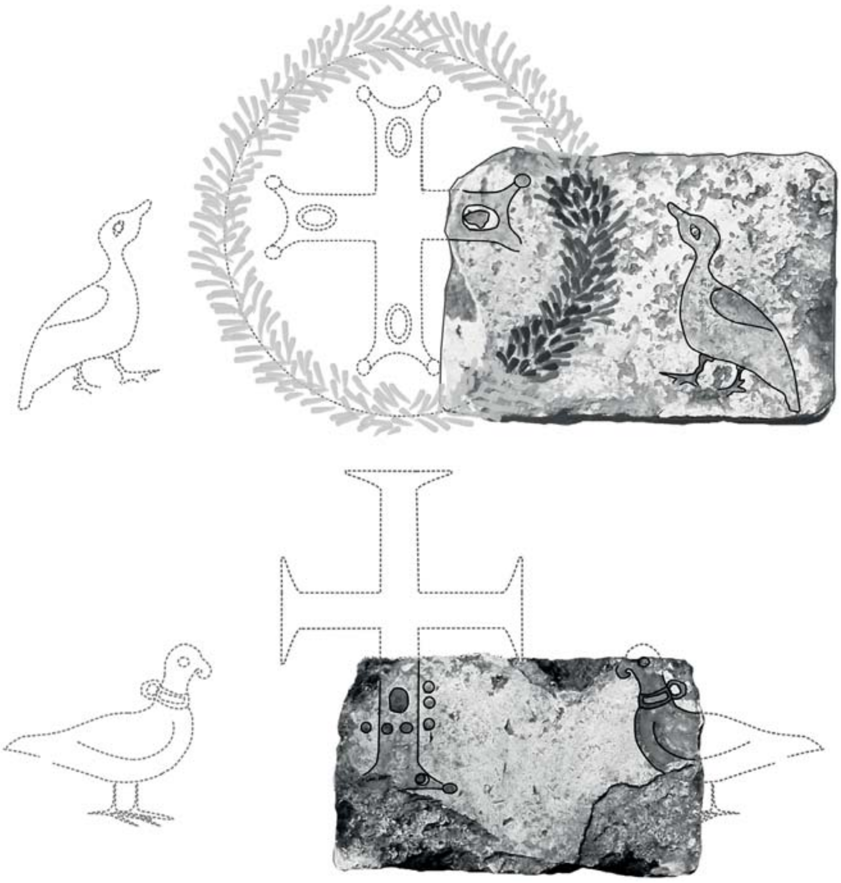


Fig. 5-5. Two ashlars with fragments of wall paintings and a hypothetical reconstruction of the representations: above, ducks(?) facing a cross in a wreath; below, pigeons(?) facing a jeweled cross; church at Zahrani; between 4th and 6th century

5.2.3 Jeweled crosses in wreaths and medallions

Catalog numbers
44–75

Many of the jeweled crosses from Porphyreon were depicted in wreaths or medallions featuring various decorative patterns. A typical wreath or a medallion is composed of several concentric circles surrounding a central disk with a jeweled cross. The cross is usually depicted against a white background of the wall plaster; only on *Cat. 46* the background is green and on *Cat. 67* it is bluish gray. The disk with the cross is usually surrounded by one or two red rings and two wide yellow bands. The leading decorative motif of the medallion runs between the two yellow bands. Around the medallion there is a thin wreath: it consists of a narrow red ring decorated with green leaves and red flowers.

The medallions are represented against the white background of plain wall plaster. Particular depictions differ in diameter, type of leading decorative motif in the medallion, and style and quality of execution, which allows fragments from one representation to be grouped together.

Wreaths

The most numerous are fragments of jeweled crosses in wreaths (*Cat. 44–53*). Remains of one such wreath with a cross could still be viewed *in situ* in the upper left part of the east wall of the basilica in the early 2000s, but has since deteriorated (*Cat. 44*).

The wreaths generally consist of a dense mass of thin long leaves painted in different hues of green with various fruits set in them [*Fig. 5-6*]. One notes red round fruit (*Cat. 45*, *46*, *49*), pears (*Cat. 45*), pomegranates (*Cat. 46*, *47*, *51*), as well as grapes and berries(?) (*Cat. 47*). *Cat. 45* also features white lily-like flowers. On *Cat. 50*, the vegetal decoration is almost abstract;

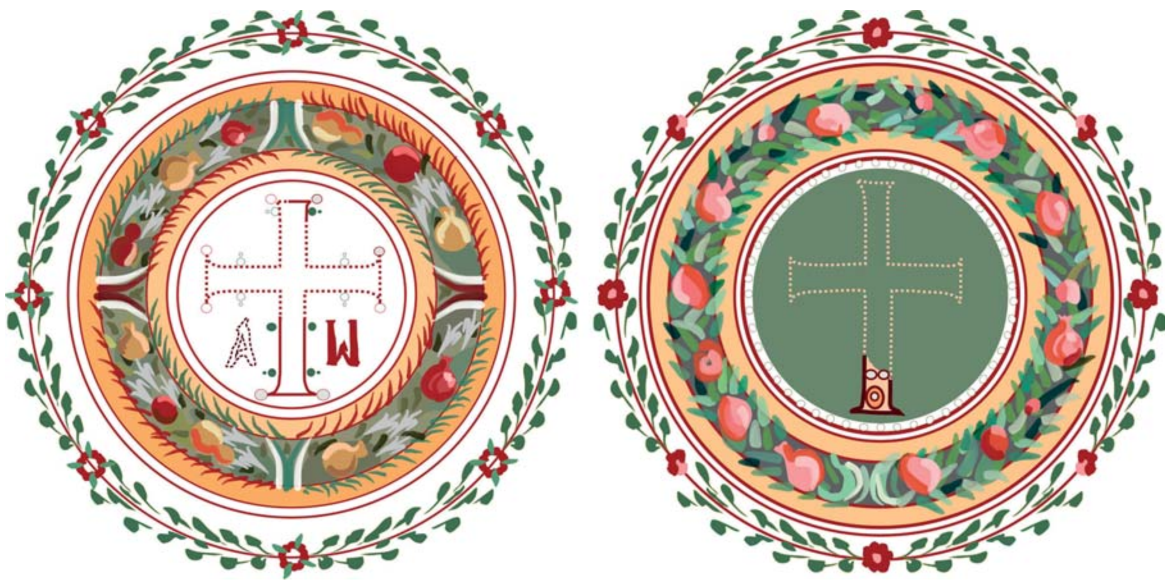


Fig. 5-6. Reconstructions of two different representations of jeweled crosses in wreaths: left, *Cat. 45*; right, *Cat. 46*

the foliage is rendered with quick, unconstrained brushstrokes, which do not imitate any particular leaf shape. The execution in the case of *Cat. 52* is rather careless and, in addition, the painting is abraded to the point that one can barely distinguish the shapes of the fruit.

The earliest depictions of the *stephanostaurion* motif (a cross inside a wreath) in wall painting appear in sepulchral contexts and feature simple wreaths made of palm branches or laurel leaves. An example of the former type can be seen in a tomb at Beit Guvrin (Moulton 1921–1922: Pls 2, 4), while a large, deep-green foliated laurel wreath decorates the Tomb with a Biblical Scene in Lohamey haGettaot (Western Galilee; both dated to the late 4th/early 5th century; Michaeli 2009: 111–113, 132) [*Fig. 5-7*]. The motif of a cross or a Christogram inside a laurel wreath is also common on stone sarcophagi and chancel screens [*Table 5-1:20–24*].

Both the palm branches and the laurels were well-established symbols of victory in Graeco-Roman art. They were adopted into Christian iconographic language to demonstrate the triumph of Christianity over sin and death, hence their popularity in early Christian art, especially in funerary contexts. Meanwhile, representations of wreaths with ribbons, fruits, and flowers set among the leaves are closely related to depictions of garlands, which links them in turn to Graeco-Roman art. The idyllic and Dionysian associations made fruit-laden garlands especially suitable



Fig. 5-7. Cross with the letters *alpha* and *omega* inside a laurel wreath; wall painting; Tomb with a Biblical Scene in Lohamey haGettaot; 4th/5th century



Fig. 5-8. Stylized jeweled cross decorated with a fruit-laden wreath; textile; 5th/6th century

for the adornment of places of festivities and funerary decoration. A fine example of such a painted garland is found running around the funerary chamber of a tomb in the necropolis of Tyre (2nd century CE; currently in the National Museum in Beirut; Dunand 1965: 48–49), and in the Late Roman Tomb H60 at Abila where a tied-up garland creates a wreath around a funerary inscription (Smith and Mare 1997: 311–312).

Garlands and wreaths with fruit and flowers continued into early Christian art and are frequently featured in wall painting and mosaics [*Table 5-1:25–29*], but very few of these representations actually parallel the depictions of crosses inside wreaths with fruits, ribbons, and flowers from Porphyreon. One of the few exceptions is a cross in a wreath adorned with red flowers and/or fruit from the ceiling of the Episcopal Basilica at Stobi (province of Macedonia; second half of 4th century; Dimitrova, Blaževska, and Tutkovski 2012: 26). Another example comes from a place far from the Eastern Mediterranean coast, namely, from Lullingstone in Kent. A large Christogram placed amidst a stylized medallion, which appears to be a combination of a wreath and geometric patterns resembling jewels, adorned one of the rooms of a villa from the 4th century (currently in the British Museum; Meates 1987). Comparanda also include a textile showing a bejeweled cross the upper part of which is surrounded by a wreath composed of red and yellow fruit [*Fig. 5-8*]. The textile in question likely served as a curtain or a wall hanging, and thus played a similar role to the wall paintings, decorating the walls of an interior.

"Cable" pattern

Some of the medallions surrounding the crosses were decorated with motifs frequent in the geometric decoration of floor mosaics. One of them is the "cable" or "rainbow" pattern, seen on *Cat. 54*.[8] The motif consists of multiple small elements in the shape of arrowheads arranged in several concentric circles [*Fig. 5-9*]. Each circle is of a different color; the outermost ring of the "arrowheads" is green, while the innermost one is red. Particular circles in between represent transitional colors, creating the impression of a rainbow or a tightly woven, multicolor cord.

The cable pattern is very common on floor mosaics where the effect of a gradual color transition could easily be achieved by arranging rows of tesserae in different hues (Balmelle et al. 1985: 32, Pl. 6b–e). It frequently appears in the frames, interlaced circles, and polygons of Late Antique mosaics [*Table 5-1:30–33*]. Physically, the nearest example of its use comes from the basilica at Porphyreon, where it decorates one of the interlaced *scuta* on the mosaic with lions and rams [*Fig. 5-10*]. In wall painting, the cable pattern is much less common. A relatively early example comes from the Late Roman Tomb H60 at Abila where it is featured in the frames of two funerary portraits (Smith and Mare 1997: 309, 312, Figs 3, 9). Intertwined circles with cable pattern decorated the vaulted ceiling of the church in the Hermitage of Niketas at Kızıl Çukur in Cappadocia (second half of the 9th century; Ousterhout 2017: 202, Fig. 2.28). In Rome, a large circle with two smaller loops on its sides decorated with the cable pattern appears on the east wall of the Santa Maria Antiqua Church (Bordi 2016b: 46) [see below, *Fig. 5-18*]; golden crosses

[8] The term "cable" pattern comes from Katherine Dunbabin's glossary of geometric patterns of ancient mosaics (Dunbabin 2012: 339–341). The catalog by Catherine Balmelle et al. (1985: 32, Pl. 6) describes it as a "symmetrically shaded band". On depictions of a rainbow in Late Antique art, including the "rainbow" on mosaics, see Kiilerich 2021.



Fig. 5-9. Reconstruction of a medallion with cable pattern (*Cat. 54*)

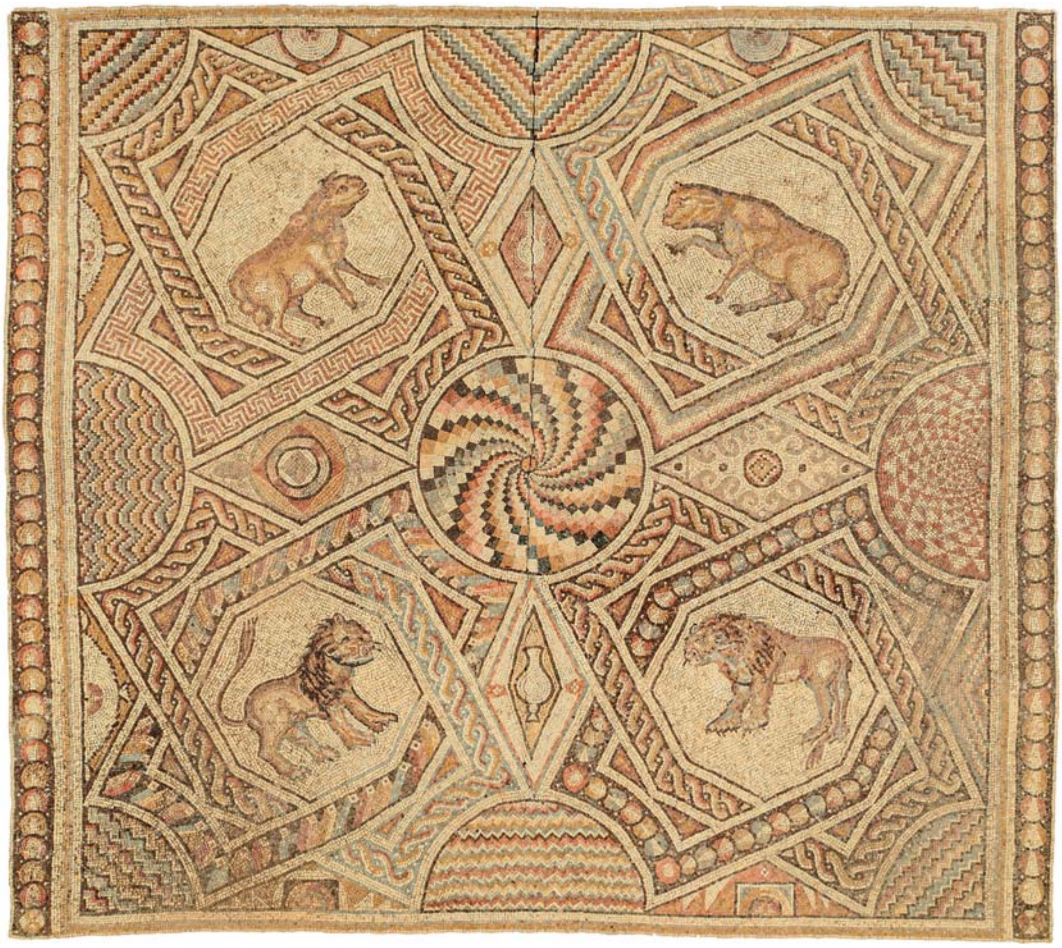


Fig. 5-10. Mosaic with lions and rams; Basilica Q; late 5th or 6th century; on view at the Beiteddine Museum. Cable pattern featured on the *scutum* in the upper right quarter



Fig. 5-11. Golden crosses with *pendilia* inside medallions with cable patterns; wall painting; Oratory of the Forty Martyrs on the Forum Romanum; first half of the 8th century



Fig. 5-12. Cross inside medallion with cable pattern; floor mosaic (watercolor copy); church at Shavei Zion; 5th century



Fig. 5-13. Ring with cable pattern at the end of the canon table sequence in Abba Garima III (fol. 4r); 350–650; Monastery of Ǝnda Abba Garima, Ethiopia

inside cable medallions can be seen in the nearby Oratory of the Forty Martyrs (Bordi 2016a: 283) [*Fig. 5-11*]. In addition, crosses in cable medallions appear on floor mosaics in the churches at Shavei Zion (Avi-Yonah 1967) [*Fig. 5-12*] and Aluma (6th century; Talgam 2014: 180, Fig. 270). In the lattermost case, the medallion contains a "Latin" golden cross with the letters *alpha* and *omega* below its horizontal bar, two bowing pheasants and, above the cross, two doves holding a garland in their beaks.

A cable pattern is also used in illuminations of Late Antique manuscripts [*Table 5-1:34–37*]. For example, it frames a depiction of Dioscorides and Heuresis in *De Materia Medica* (The Vienna Dioscorides; early 6th century; fol. 4v; Weitzmann 1979: 206) and fills the ring design which closes the canon table sequence in Abba Garima III [*Fig. 5-13*]. The motif is also featured on headpieces, for example, in the Rabbula Gospels [see below, *Fig. 6-15*] or Abba Garima III [see below, *Fig. 5-33*].

All renderings of the cable pattern, whether in monumental or miniature painting, share a common feature, namely, that the design always consists of numerous small elements (e.g., arrowheads or dots) in various hues and arranged in strands. Considering this visual effect, which derived from the use of tesserae, mosaic floors must have been the primary source of inspiration for designs of this type.

Lotus-band

A band of alternating pink-red and green lotus flowers is featured on *Cat. 55–58* [*Fig. 5-14*]. Fine white (*Cat. 55*, *57*, *58*) or green (*Cat. 56*) details were painted on top of soft color transitions within each flower.

Just like the cable pattern, the lotus-band motif is often featured on floor mosaics (Balmelle et al. 1985: 112, Pl. 62a,c,e), albeit it is slightly less common. It usually appears in the frames of large mosaic panels, sometimes in other compositions, for example, interlaced *scuta* [*Table 5-1:38–43*]. Only a couple of examples show the employment of the lotus-band motif in extant wall decorations. A good parallel for the depictions from Porphyreon comes from the vault mosaic of the Mar Gabriel Church at Kartmin (512; Hawkins, Mundell, and Mango 1973). The medallion, featuring alternating, red and green lotus flowers, surrounds a jeweled cross with diagonal rays radiating from the intersection of its members depicted against a starry dark blue background [*Fig. 5-15*]. Another example of the lotus-band motif in wall painting comes from the hypogeum at Homs/Emesa where it runs along the arch of the niche in the east wall of the burial chamber [see above, *Fig. 5-4* left].

Wavy ribbon

Medallion fragments *Cat. 59* feature the motif of a wavy ribbon. It resembles the lotus-band in its use of alternating, red and green, bell-shaped elements [*Fig. 5-16*]. In this motif there are also soft color transitions from deep red or deep green to off-white within each bell-shaped element. This motif lacks, however, the contours that delineate particular petals as with the lotus flowers.

The wavy ribbon is another common motif on ancient and Late Antique floor mosaics (Balmelle et al. 1985: 110, Pl. 60e; *Table 5-1:44–46*), but extant examples from wall painting are again



Fig. 5-14. Reconstruction of a medallion with lotus-band (*Cat. 55*)



Fig. 5-15. Jeweled cross inside a medallion with lotus-band; vault mosaic (watercolor copy); Mar Gabriel Church, Kartmin; 512



Fig. 5-16. Reconstruction of a medallion with wavy ribbon (*Cat. 59*)

few. One such example survived in the "two-story chapel" adjacent to Basilica A at Resafa, where a wavy ribbon decorated the soffit of one of the arched windows (Ulbert 1986: 91) [*Fig. 5-17*]. A wavy ribbon also runs above an arcosolium in a Late Antique tomb in Urfa/Edessa (4th–6th century; Çetin et al. 2020: 133–136, Fig. 12). In the West, it is found in the said Santa Maria Antiqua Church in Rome: the lowermost register of the east wall of the presbytery is occupied by two panels with a painted imitation of marble slabs framed with bands of red and blue wavy ribbons (Bordi 2016b: 46) [*Fig. 5-18*].



Fig. 5-17. Wall painting with wavy ribbon (remains *in situ* and watercolor copy); the soffit of one of the windows in the "two-story chapel" adjacent to Basilica A at Resafa; 6th century

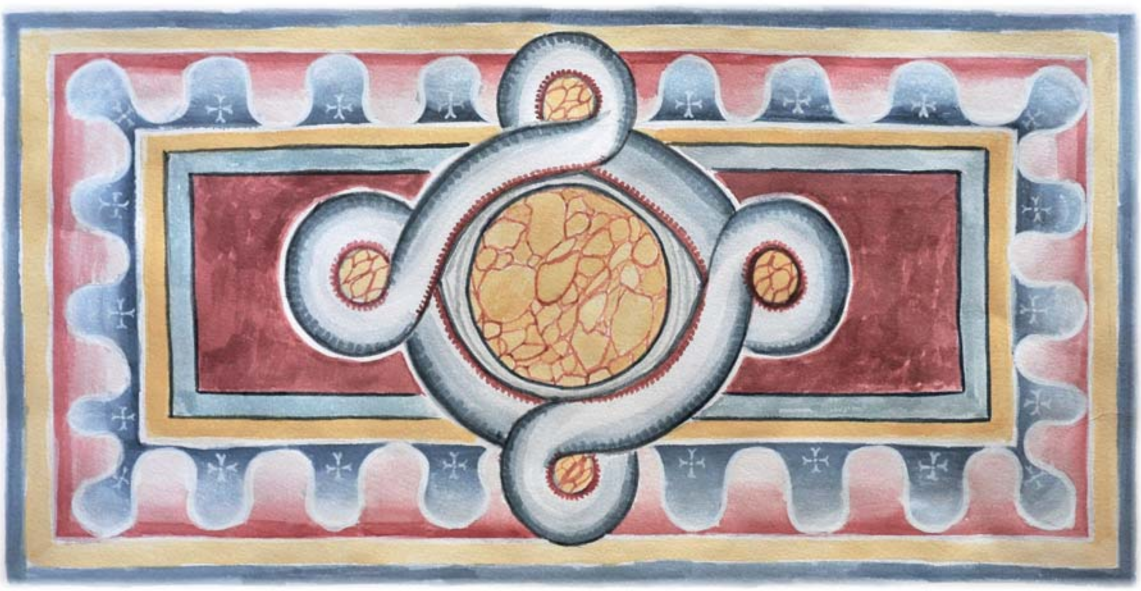


Fig. 5-18. Looped circles with cable pattern and frame with wavy ribbon; wall painting (watercolor copy); Santa Maria Antiqua Church at Rome; first decade of the 7th century

A wavy ribbon appears also in the frames of illuminations of 6th-century codices, for example, in the Syriac Bible of Paris, where it runs along the top and bottom edges of the representation of Job on folio 46r (late 6th century; Sörries 1991: 29–31, Fig. 6) or in the Rabbula Gospels, where it is featured on two lateral columns supporting the headpiece of the canon tables on folio 8r (Bernabò 2008b: 98, Pl. XV) [see below, *Fig. 5-22*].

Twisted ribbon

Two fragments of medallions were decorated with a twisted ribbon motif (*Cat. 60*, *61*) [*Fig. 5-19*]. *Cat. 60* shows a sinusoidal two-colored ribbon, which is green on one side and red on the other. There are reflections of light in the middle of each color segment of the ribbon. A similar, red and yellow twisted ribbon, albeit poorly preserved, is featured on *Cat. 61*.

The twisted ribbon is another pattern that is rather common on floor mosaics (Balmelle et al. 1985: 115, Pl. 65; *Table 5-1:47–49*) but is seldom seen in surviving wall decorations. One example was the second phase of wall mosaics in the St Demetrios Church in Thessaloniki, no longer extant. It featured a horizontal twisted ribbon that ran above a cycle of votive representations in the spandrels of the nave (603–688/9; Cormack 1969: 40–45, Pls 7–9). Further from the Eastern Mediterranean, the twisted ribbon motif is found in wall mosaics in Ravenna. In the Mausoleum of Galla Placidia, four bands featuring a green and blue twisted ribbon represented against a red background follow the curvature of arches supporting the dome (dated about 425; Rizzardi 2012: 45–55, Fig. 18). In the Archiepiscopal Palace, a blue and yellow twisted ribbon frames a wall-mosaic representation of Christ treading on a lion and an asp (494–519; Rizzardi 2012: 106–115, Fig. 89).

In illuminated manuscripts, just like the wall paintings, the twisted ribbon acts as a framing device or to emphasize the features of fictive architecture, as in the headpiece of folio 4v of the Rabbula Gospels, where a twisted blue and red ribbon follows the curve of an arch (586; Bernabò 2008b: 88–89, Pl. VIII).



Fig. 5-19. Reconstruction of a medallion with twisted ribbon (*Cat. 60*)

Guilloche

Cat. 62 features tightly arranged red, green, and yellow S-shaped strands that form a guilloche [*Fig. 5-20*]. At first glance, the motif seems also to be extremely popular on floor mosaics, examples of which are too many to list. However, a closer look shows that floor mosaics usually feature two-strand guilloches (e.g., Balmelle et al. 1985: 120–121, Pl. 70h). If three strands are present, the guilloche normally takes the form of a braid. A three-strand guilloche consisting of a series of S-shaped elements (Balmelle et al. 1985: 120, Pl. 70f), as on *Cat. 62*, is much less common than the two-strand version [*Table 5-1:50–52*].

To the best of the author's knowledge, there are no surviving examples of a three-strand guilloche in wall paintings or wall mosaics. Painted two-strand guilloches are occasionally featured in decorative programs of Late Roman tombs, where they are usually arranged in horizontal or vertical bands that emphasize compositional divisions of the decoration [*Table 5-1:53–56*]. In a similar manner it is employed in Late Antique wall paintings from Egypt, for example, Bawit, where it demarcates the horizontal compositional divisions in Chapel XIX and the lower limits of a large figural scene in Chapel XXXIII (6th/7th century; Clédat 1906: 103–106, Pl. 76–83; 1916: 17–18, Pl. 12). Like the previously described motifs, guilloches are also featured in the fictive architecture depicted on the pages of illuminated manuscripts (e.g., Rabbula Gospels, fol. 11r).

There are two extant examples of crosses in guilloche medallions that parallel the depiction from Porphyreon: the medallion on the vault mosaic in the Mar Gabriel Church at Kartmin (Hawkins, Mundell, and Mango 1973: 287, Figs 20–21) and a wall painting with a similar representation from Kellia (Rutschowscaya 1992: 75) [*Fig. 5-21*].



Fig. 5-20. Reconstruction of a medallion with three-strand guilloche (*Cat. 62*)



Fig. 5-21. Equal-armed jeweled cross inside a medallion with two-strand guilloche; wall painting (watercolor copy); Kellia, Kom 2019, room XLV (now at the Louvre); 7th/8th century

Miscellaneous types of decoration

Four other types of decorative patterns were featured on medallions from Porphyreon. Each one of them is represented by a single painting fragment. *Cat. 63* represents a motif, which appears similar to the "cable" pattern, although a series of red oblong brushstrokes running along its inner perimeter resembles leaves from the medallions decorated with wreaths. *Cat. 64* features geometric decoration consisting of red and green bands crossed against a white background. *Cat. 65* is extremely deteriorated but most likely featured a series of yellow round elements (fruit?) against a dark red background. Finally, *Cat. 66* depicts a series of differently colored roundels (rosettes?) that are reminiscent of the "gemstone" motif appearing on *Cat. 77* and *Cat. 78* discussed below.

Probably the most interesting among these fragments is *Cat. 67*, which depicts a bluish gray disk surrounded by a yellow frame with rectangular and round jewels, similar to the depictions of jeweled crosses. The cross, which used to occupy the center of the bluish-gray disk, is no longer preserved, save for some remains of orange paint in the upper and right edges of the extant plaster (fragments of the horizontal and vertical members of the cross), a white letter *alpha*, and a beam of white rays to the left of it. A good parallel for such a jeweled frame comes from Chapel XXXII at Bawit, where such frames enclose painted imagines clipeatae of Christ and St Zacharias (6th/7th century; Clédat 1916: 14, Pl. 8). A couple of other examples of jeweled medallions come from floor and wall mosaics [*Table 5-1:57–58*].

Cat. 68 also belonged to a medallion surrounding a cross, but it is too fragmentarily preserved to recognize the type of decoration; *Cat. 69* is also too abraded. In addition, *Cat. 70–75* retain only the outermost red ring decorated with flowers and leaves, which surrounded the medallions. A small fragment of a medallion accompanied by a partridge is visible on *Cat. 99*.

5.3 Geometric motifs

Catalog numbers
76–83

Geometric motifs appear also in compositional arrangements from Porphyreon other than the decoration of the medallions with crosses.

5.3.1 Wavy ribbon

A narrow vertical strip of plaster with remains of a wall painting survived *in situ* in the northeastern corner of a room adjacent to Basilica Q from the south, provisionally interpreted as a chapel (Waliszewski et al. 2008: 33). It depicts a pink, red, and yellow wavy ribbon (*Cat. 76*).

Instances of employment of the wavy ribbon in ancient and Late Antique mosaics, wall painting, and miniature painting have been presented above in the context of the medallions with this kind of decoration. Regarding the fragment in question, one should note its disposition on the wall and the role it played for the compositional divisions of painted decoration. The wavy ribbon, running vertically in the corner between two walls, underscored the architectural divisions and possibly framed a larger depiction, similarly to motifs of this kind framing large mosaic carpets or decorating imaginative architecture in folios of illuminated codices (e.g., fols 3v and 8r of the Rabbula Gospels) [*Fig. 5-22*].



Fig. 5-22. Wavy ribbon on columns flanking canon tables; Rabbula Gospels (cod. Plut. I, 56), fol. 8r; 586; Biblioteca Medicea Laurenziana, Florence

5.3.2 "Gemstone" motif

Two fragments of wall paintings feature an ornamental decoration called here a "gemstone" motif (*Cat. 77*, *78*).[9] This motif consists of a series of slightly overlapping red, orange, and green disks. Each of the disks features a brighter, shaded "wedge", which creates the illusion of a three-dimensional, convex surface like the faceting of a cut and polished precious stone. On both elements, the "gemstones" are depicted against a black background with sets of three white dabs of paint, possibly representing pearls, placed in the empty fields between circles.

On *Cat. 77*, the ornament is arranged in a band, bordered by red contours; a fragment of a peacock's train appears above it (see *Cat. 94*). Most likely, the "gemmed" band constituted a painted cornice.[10] On *Cat. 78*, the ornament is given a circular shape, so it was likely yet another motif decorating a medallion (with a cross?). Both paintings were executed with thick, opaque paint.



Fig. 5-23. Detail of the frame of a mosaic with lions and rams from Basilica Q; late 5th or 6th century; on view at the Beiteddine Museum. The "gemstone" motif occurs also on the interlaced *scuta* of the same mosaic

[9] Only a few examples of this motif are known from floor mosaics so there is no established nomenclature. Various terms have been used to describe it, for example, "polychrome row of overlapping chevron-shaded circles" (Balmelle et al. 1985: 95), "overlapping 'metallic' discs" (Michaelides 1987: 47), "overlapping circles superimposed by triangles" (Donceel-Voûte 1988: 365), or "biconical polychrome pearls" (Guimier-Sorbets 2005–2006). This motif occurring in the Rabbula Gospels is also compared to shells (Bernabò 2008b: 86).

[10] For a discussion of the architectural setting of this element see below, *§ 6.2.1*.



Fig. 5-24. Medallion decorated with a "gemstone" motif; floor mosaic; church at Khaldé-Choueifat; late 5th century; on view in the gardens of the National Archaeological Museum in Beirut

Unlike the geometric designs discussed above, the "gemstone" motif is rarely seen on floor mosaics. The closest example comes from the basilica of Porphyreon, where it appears on the interlaced *scuta* and lateral bands of the mosaic with lions and rams [see *Figs 5-10*, *5-23*]. Other examples include a medallion with a depiction of a panther standing above a fallen ox in the southern aisle of the church at Khaldé-Choueifat (Chéhab 1957: 114–116; Donceel-Voûte 1988: 365) [*Fig. 5-24*], the frame of a rectangular panel with a depiction of a *kantharos* and vine scrolls in the southern aisle of the lower church at Khan Khaldé (Duval and Caillet 1982: 326–327) [see below, *Fig. 5-41*], and interlaced *scuta* on the main mosaic in the Chapel of the Martyr Theodore adjacent to the cathedral church at Madaba (562; Piccirillo 1997: 117, Figs 99, 109).[11]

A fragment of a wall mosaic found in the eastern part of the church in Petra represents one such green "gemstone" and a part of a yellow/orange one next to it (Waliszewski 2001: 328, Fig. 1). Also, one of the three medallions with crosses depicted on the vault of the Mar Gabriel Church at Kartmin is reminiscent of the "gemstones", although it is not an exact parallel: it features overlapping scales or, alternatively, a series of flower buds (Hawkins, Mundell, and Mango 1973: 287, Fig. 19) [*Fig. 5-25*].

The "gemstone" motif also appears in illuminated codices. In the Rabbula Gospels, it decorates the frames of two columns of the Letter of Eusebius to Carpianus [*Fig. 5-26*], and it appears in the headpiece decoration of a canon table on folio 10r. Tightly arranged and overlapping "gemstones" fill the ring with portraits of Evangelists and the title of the canon tables in the Rossano Gospels (Cavallo 1992: 25–26) [*Fig. 5-27*]. A series of colorful "gemstones" separate two images depicted on folio 25r of the Syriac Bible of Paris (late 6th century; Sörries 1991: 27–28, Fig. 4).

[11] For a list of occurrences of this motif on floor mosaics see Guimier-Sorbets 2005–2006.



Fig. 5-25. Medallion surrounding a golden cross; vault mosaic; Mar Gabriel Church at Kartmin; 512. The scales pattern is reminiscent of "gemstones"



Fig. 5-26. Frames of the Letter of Eusebius to Carpianus featuring a "gemstone" motif; Rabbula Gospels (cod. Plut. I, 56), fol. 3r; 586; Biblioteca Medicea Laurenziana, Florence

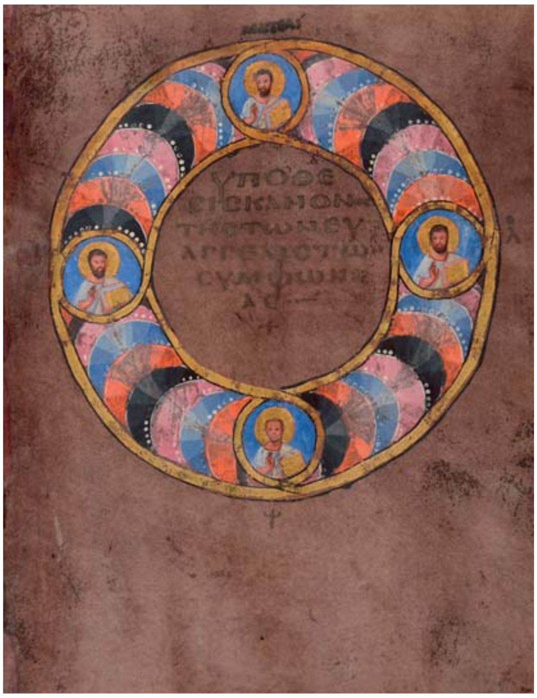


Fig. 5-27. Ring with a "gemstone" motif and portraits of the Evangelists; Rossano Gospels, fol. 5r; 6th century, Cathedral of Rossano

5.3.3 Red triangles and zigzags

Four stone elements of slightly curved shape, pertaining to a hoodmold, were decorated with a simple design of solid red triangles, each surmounted with a trefoil consisting of three small roundels (*Cat. 79*).[12] A similar red pattern, although with single roundels at the tops of the triangles instead of the trefoils, delineated a niche in the Western Baths at Beth Shean/Scythopolis [see above, *Fig. 5-3*]. A frame made of red triangles topped with little roundels surrounded a recess in the burial complex of the Monastery of St Theoctistus (Deir Muqallik) (Goldfus, Arubas, and Alliata 1995: 279, Fig. 16). This simple design finds its counterpart on floor mosaics, in the saw-tooth motif consisting of a series of solid red triangles against a white background.

Two fragments feature a red monochrome band composed of a red zigzag running between two horizontal lines (*Cat. 80*). Dabs of red paint fill the triangular fields created by the zigzag; *Cat. 80b* retains also the uppermost part of a red wreath. These paintings were executed rather carelessly; the paint layer is thick with a characteristic brushstroke texture indicating a rigid type of brush. The lines are not straight and the triangles are irregularly spaced. The plaster undulates and is uneven. This motif appears to have constituted some sort of a frieze. A parallel may be found in the decoration of a hoodmold of the arched entrance to the Late Antique Tomb 4112C at the necropolis of Tyre (Chéhab 1985: 630, Pl. CXXX).

5.3.4 Miscellaneous geometric motifs

Some fragments, like *Cat. 81*, are relatively well preserved, but difficult to interpret because so little of the motif has survived. In this case, there is a dark orange color field bordered by straight parallel red lines, depicted against a white background. Inside the orange field are two green laurel-shaped leaves(?). One of them has white contours, while the other one seems to have gray outlines. The painted area is densely covered with specks of dark red and dark green paint. The specks do not occur in the white background visible on both sides of the painting, which suggests that the paint was splashed intentionally and specifically onto the painted surface. It is the only fragment that exhibits such an "action painting" effect. The plaster is folded over one of the edges, which indicates that this masonry element was situated at the edge of some kind of aperture in the wall (door, niche?).

The fragment has been tentatively ascribed to geometric motifs on the basis of certain similarities with patterns occurring in illuminated manuscripts. In the Rabbula Gospels, pink, blue, and green laurel-like leaves are arranged in rows of three on the arch over the depiction of the Virgin and Child [see below, *Fig. 6-15*]. Almost identical decoration runs along the arches above the canon tables in Abba Garima I (530–660; AG I, fols 4v and 9v; McKenzie and Watson 2016: Pls 38–39) and fills the frame surrounding the depiction of a saint (possibly St Eusebius) in Abba Garima III (330–650; AG II, fol. 259v) [*Fig. 5-28*]. The fragment discussed here may have featured such a motif of laurel leaves and, like the guilloche or the "gemstone" motif, acted here as a subordinate framing decoration.

Nevertheless, the paint splashes suggest an alternative interpretation. The two outermost columns framing a canon table on folio 10v in the Rabbula Gospels have their shafts covered with

[12] For the architectural setting of these four elements of a hoodmold see below, *§ 6.2.1* [*Figs 6-4*, *6-5*, *6-6*].

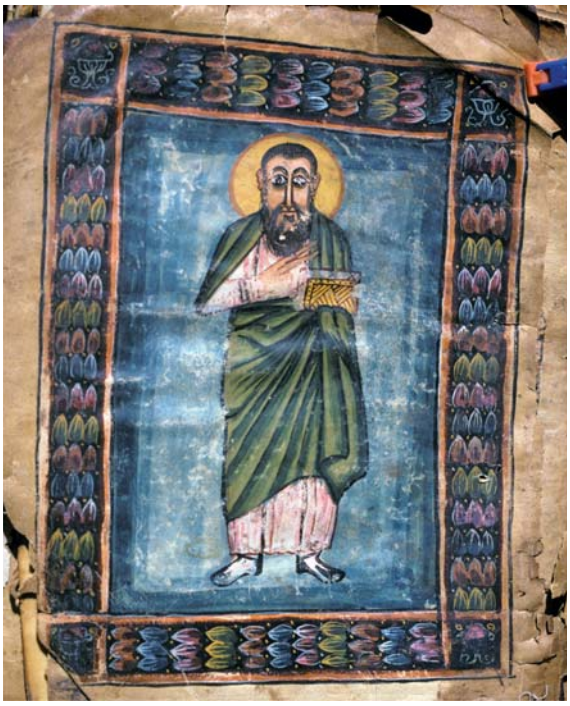


Fig. 5-28. Frame surrounding the figure of a saint (Eusebius?); Abba Garima III, fol. 259v; 330–650; Monastery of Ǝnda Abba Garima, Ethiopia



Fig. 5-29. Detail of one of the lateral columns on fol. 10v of the Rabbula Gospels (cod. Plut. I, 56); 586; Biblioteca Medicea Laurenziana, Florence. Colorful spots and splashes were likely intended to imitate marble

multicolored oblong and circular shapes, as well as smaller "splashes", which are clearly intended to imitate marble (Bernabò 2008b: 101–102) [*Fig. 5-29*]. Therefore, *Cat. 81* could depict a column shaft. Its location next to an opening in a wall, possibly a doorway, stands in support of such an interpretation. One could imagine columns painted flanking a passage, window, or niche, possibly topped with a representation of an arch [see above, *Fig. 5-4* left].

Cat. 82 is equally difficult to interpret, although it is likely to represent a geometric design. It depicts a fragment of a yellow band with a repetitive pattern of off-white circles, with dark red contours alternating with pairs of white dabs. The band appears to follow a gentle curve as it occupies only a corner of the plastered ashlar face. A dark red broken line follows the yellow band along its outer perimeter. The plaster appears to be slightly concave at the bottom left corner of the ashlar face, where it is painted with a dark pink color.

The circles alternating with pairs of white dabs of paint are very much reminiscent of the manner of rendering precious stones on the depictions of jeweled crosses. The large circles may represent jewels, while the white dabs could imitate pearls. However, given the inclination of the motif preserved on *Cat. 82*, it is unlikely that it belonged to a cross. Such depictions of jewels and jeweled bands appear as framing motifs on floor and wall mosaics in Late Antique churches in both the East and the West [*Table 5-1:59–63*]. This could have been the role of the yellow, jeweled band on the fragment in question. Its position and the presence of a concave surface at the bottom right corner of the ashlar suggest it could have run along the edge of a niche or some other concave opening.

Finally, two fragments of wall paintings show a geometric pattern consisting of gray (originally black perhaps) parallel and perpendicular lines and triangles of the same color (*Cat. 83*). A wide red band ran alongside the geometric design. These representations from the residential district, similarly to *Cat. 80*, represent a low level of artistry and quality of execution.

5.4 Human figures

Catalog numbers
84–93; see also *179*, *180* for depictions of human figures in genre(?) scenes (*§ 5.8*)

Representations of human figures among the extant wall paintings from Porphyreon are few. Most of them come from the residential district excavated in 1975 by Saidah; they are known only from an archival collection of color slides.

5.4.1 Imago clipeata

One of the fragments documented in 1975 shows an imago clipeata of a frontally rendered haloed figure (*Cat. 84*). The upper part of the image was already missing at the time, but one can tell that it depicted a man with a short, gray beard. He is wearing a red cloak draped over his proper left shoulder, on top of a light pink tunic with clavi. The draping of the cloth is depicted schematically, with broad, quick brushstrokes. The halo is yellow with a red contour. Although the colors on the slide are somewhat distorted, it can be seen that the background behind the figure was blue. The medallion is enclosed by a double red ring drawn most likely with a compass. The figure was painted after the medallion was outlined, as evinced by the brushstrokes rendering the garment overlapping the red contours of the medallion. The imago clipeata was depicted against a white background.

An imago clipeata is a classical formula of portraiture that was used to commemorate and to honor the depicted person or to represent their apotheosis. Its official character, emphasized by the frontal rendering of the sitter, made it especially common in sepulchral monuments [*Table 5-1:64–66*; *Fig. 5-30* left], but it was not reserved for funerary contexts, even if surviving examples from non-sepulchral settings are not numerous. Some of the most renowned depictions of this type are imagines clipeatae arranged in a frieze below the vault in the House of the Roman Scribes at Dura-Europos (mid-3rd century; Rostovtzeff et al. 1936: 291–296, Pls XLIV–XLV).

The formula of the imago clipeata with its strong official character was employed in early Christian art for representations of Christ, the saints, apostles, and Old Testament prophets, as well as secular portraiture of prominent figures, in both the East and the West, in catacomb painting, wall mosaics, and illuminated manuscripts. It became especially popular in the 5th and 6th centuries (Sotira 2013: 55–131). For example, an imago clipeata of Christ is found in Chapel XXXII at Bawit (6th/7th century; Clédat 1916: 14, Pl. 8) and in a cistern converted into a chapel at Salamis where it is depicted above a Nilotic landscape (6th century; Bardswell and Soteriou 1939; Sacopoulo 1962: 76–80, Figs 13–14) [see below, *Fig. 5-38*]. The attire consisting of a tunic with clavi and a cloak draped over one of the sitter's shoulders is also of classical origin and may be seen on a number of Roman-period portraits of prominent figures



Fig. 5-30. Imagines clipeatae: left, deceased (or the Virgin Mary) painted above the entrance to a loculus; tomb complex XXXI at the necropolis of Tyre; late 3rd–early 4th century; on view at the National Archaeological Museum in Beirut; right, Prophet Jonah; apse mosaic in the Monastery of St Catherine on Sinai; between 548 and 565

(e.g., a mosaic from a house at Sousse depicting Virgil writing the Aeneid; now in the Bardo Museum) [*Table 5-1:67–71*].

The fragment from Porphyreon resembles imagines clipeatae of the Evangelists wearing tunics with clavi and cloaks draped over one shoulder that are featured on a ring design from folio 5r of the Rossano Gospels (Cavallo 1992: 25–26) [see above, *Fig. 5-27*]. However, the figure from the Porphyreon tondo cannot be one of the Evangelists for lack of a book in his hand. This imago clipeata, especially the stylized rendering of the garment, is very much reminiscent of tondi with images of prophets and apostles accompanying the Transfiguration scene in the Monastery of St Catherine in Sinai (Sotira 2013: 126–131) [*Fig. 5-30* right] or a depiction of the Virgin Mary at the Church of the Panayia Kanakaria at Lythrankomi (6th century; Megaw and Hawkins 1977: 40–47, Figs 39, 48–49).

While the portrayed in this case cannot be identified, because there are no attributes depicted and the upper part of the face is missing, the blue background indicates his prominence. Egyptian blue was the most expensive pigment on the palettes of painters from Porphyreon (see above, *§ 3.8.2*), and it was used very sparingly as it appears only on a handful of other fragments (e.g., *Cat. 94*, *128*). Abundant use of blue color in the background of this imago clipeata underscores the importance of this figure. Such application of blue pigment for the rendering of the background is paralleled by the imago clipeata of Christ from Bawit mentioned above.

5.4.2 Frontally rendered figures

Frontally rendered figures are depicted on three fragments of wall paintings recorded by Saidah. The size of the depictions cannot be read from the images, but given the average ashlar size used in house construction, they would have measured about 30–40 cm in height. *Cat. 85* shows

an elderly, haloed man. His sunken cheeks, gray beard, intense gaze of the round eyes and pronounced eyebrows give him the appearance of an ascetic or a prophet. His left hand can be seen at the right edge of the fragment. The upper body of the figure is very vaguely represented. The color palette is limited to yellow, orange, pink, and brown. Light gray and black brushstrokes delineate his beard and hair. The man is depicted against a white background. This representation appears somewhat sloppy and crude in terms of artistic quality. Same as with the imago clipeata, the fragmentary condition of this painting does not support an identification of the portrayed person. Nonetheless, some general observations can be made, notably that the representations of the apostles, saints, and prophets from the pre-iconoclastic period show a certain level of distinction of the facial features. The beard was one such facial trait that Late Antique artists used to individualize portraits. Different shapes, lengths, and colors of beards may be observed, for example, in the tondi with depictions of prophets and apostles from the apse mosaic in the Monastery of St Catherine in Sinai. Different beards also characterize particular Evangelists and Old Testament prophets in illuminated manuscripts (e.g., in Abba Garima I, III). Therefore, the long, gray, pointy beard depicted on the wall painting from Porphyreon was almost certainly meant to be distinctive of the represented person. Among the imagines clipeatae from the St Catherine mosaic, the same beard type is seen on portraits of the Apostles Simon, Mark, Andrew, and Matthew, the Prophet Malachios, and Elias depicted in the main scene of the Transfiguration.

A fragment of the man's left hand at the edge of the plaster on *Cat. 85* indicates the pose of an orans. A depiction of three haloed saints in orans pose from Caesarea is a good parallel (Avner 1999: 109–118) [*Fig. 5-31*]. Alternatively, the man could have been portrayed with only one hand raised as in the images of prophets in the *Alexandrian World Chronicle* (7th century; fol. IIIv; Bauer and Strzygowski 1905: 120, Pl. III; McKenzie and Watson 2016: Figs 86–87). In the case of just one hand raised, one would expect it to be the right hand.



Fig. 5-31. Wall painting depicting three orans saints; vaulted room of uncertain purpose; Caesarea Maritima; late 6th or early 7th century; on view at the Israel Museum, Jerusalem

The pose is of an orans also in the case of *Cat. 86*. The fragment retains the torso, proper left arm, neck, and chin of a person, most likely male. The man is wearing a green tunic hemmed along the collar with a purple band, which is adjoined in the middle by a vertical band of the same color. White dabs painted on top of the bands may represent some embroidered or sewn-on decoration (possibly pearls?). On top of the tunic, he is wearing a dark orange garment with sleeves. His hands are stretched out to the sides. There is an oblong, unidentified shape above his proper left shoulder. The person is depicted against a plain white background. The painting is executed with quick, rather broad brushstrokes. Unlike the two previously discussed images of human figures, which were characterized by a rather vague rendering of the faces, the shape of the countenance on this fragment is emphasized with a bold dark red contour.

The hemmed collar and the vertical stripe on the garment of the depicted figure are reminiscent of oriental fashion. Similar clothing can be seen in wall paintings from the synagogue at Dura-Europos (245–246 CE), for example, in the depiction of the Enthroned Ahasuerus or in Ezekiel's Vision of the Valley of Dry Bones, where the figures are shown in Persian or Parthian clothes (Bartal 1998: 133–134, Figs 1–2). In Late Antique art, oriental garments are hallmarks of several Old and New Testament figures, for instance, the Prophet Daniel, the three Hebrew youths in a fiery furnace, the merchants who bought Joseph from his brother, and the Magi who brought gifts to the infant Christ (Bartal 1998: 134). Furthermore, hunters depicted in scenes of animal hunts and chases on floor mosaics often wear tunics with band decoration on the front. For example, a horseman spearing a cheetah and a swordsman fighting a bear depicted on the mosaic floor of the church at Kissufim wear this type of garment: the neckline and vertical bands on the front of their tunics are decorated with sewn-on or embroidered ornaments (Cohen 1993) [*Fig. 5-32*]. The hunters wear pants and shoes, which altogether gives them an oriental



Fig. 5-32. Swordsman wearing tunic with embroidered bands; floor mosaic; church at Kissufim; 576

appearance. Furthermore, church benefactors represented on floor mosaics often wear similar tunics with band decorations [*Table 5-1:72–75*]. The figure portrayed on *Cat. 86* may, therefore, be a pious donor depicted as an orans. The vivid colors of the garment (green, purple, orange) and decorations on the bands of the tunic could indeed represent a costly garment and thus, indicate the wealth of the wearer. However, hypothetically, he could also be the Prophet Daniel or one of the Hebrew youths in a fiery furnace. These figures were usually depicted in oriental garments, taking on an orans pose, as seen on a wall painting of the three youths from Wadi Sarga (late 6th or early 7th century; Dalton 1916: Pl. IX) or a depiction of Daniel on the opening page of his Book in the Syriac Bible of Paris (late 6th century; fol. 186; Sörries 1991: 44–47, Fig. 22).

A bust of a beardless young man on *Cat. 87* has curly hair, a serene expression on his face, and slightly raised eyebrows. The man appears to be smiling and has a halo around his head. There is no clear border between the neck and the body, so it is difficult to discern what he might be wearing. The painting appears almost monochrome, although the tonal transitions in evidence suggest an attempt to articulate details with shading. Little can be said about the identity of the portrayed figure. He might be a youthful saint as indicated by the halo and the lack of a beard.

Among the fragments of wall paintings discovered in 1987 in the basilica, only one unequivocally depicts a person: the upper half of a head and possibly the proper right hand of a frontally rendered figure, possibly another orans (*Cat. 88*). The figure is set against a white background. He or she does not have a halo, and the facial features are lost in a blurry mass of dispersed ocher, red, and pink colors. There is a *titulus* to the left of the head which probably continued on the other side of the figure. It reads ΠΑΝΕ, which may be the beginning of a name or an epithet of the depicted person (see below, *§ 5.9*).

5.4.3 Genre(?) scenes

Two fragments documented on Saidah's slides might have belonged to more complex, possibly narrative scenes. They represent figures, which seem to be captured in motion (*Cat. 89*, *90*). The apparent scale of these representations is small relative to the stone surface, and the level of details in the images is reduced.

Cat. 89 depicts the head and proper left shoulder of a male shown in three-quarter view, facing his proper right side. A large, rotund shape can be seen in front of him. On the right side of the plaster is a fragment of a wide red band. The painting is almost a monochrome red; only the flesh-tones and the unidentified shape in front of the man are pink. The somewhat concerned or angry expression on the man's face may be due to a deficiency of artistic skills rather than being an intended effect. The scene is too fragmentary for the theme to be recognized.

Cat. 90 shows the proper right leg of a walking man wearing a beige tunic; the figure holds some kind of a staff or rope in both hands. The lower parts of two legs of another figure can be seen in front of him. Their flesh-tone seems to suggest that it might be another walking person, although the shape of these limbs and the black contours, which do not occur on the depiction of the man's leg, indicate that it is likely an animal. The figures do not seem to be facing each other. The ground level is suggested by a straight black strip (which might well have served as the frame of the depiction). Plants with yellow flowers(?) are depicted between the figures. The scene

appears to be painted against a pale beige background, unlike *Cat. 89*, which is set against plain white plaster.

Assuming that the figure in front of the man is an animal, some general parallels, especially to men leading animals, can be pointed out in representations of hunters and rural life on Late Antique floor mosaics [*Table 5-1:76–78*].

A few other fragments of monochrome wall paintings depicting men and animals (possibly hunting scenes and peasants at work) were documented on slides from 1975 and are discussed below (*§ 5.8*).

5.4.4 Fragments

Cat. 91 and *Cat. 92* are difficult to interpret. The broad, slightly curved brushstrokes are reminiscent of the rendering of garments. If so, *Cat. 91* could represent a figure in a pink tunic and yellow cloak, while *Cat. 92* could be interpreted as a cloak pinned together on the shoulder with a round pin. *Cat. 93* shows an oblong, bent shape; its flesh-tone suggests the representation of a human limb, possibly a bent leg.

5.5 Animals

Depictions of animals constitute the second most numerous iconographic group after the crosses. They include representations of different species of birds and beasts, and one image of a fish. There are also some fragments that very probably depict animals, but their fragmentary condition excludes a specific identification. The broader compositional context of the animal representations is rarely visible due to the state of preservation of the paintings.

5.5.1 Birds

Catalog numbers

77, *94–108*; see also *122–125*, *128* for possible depictions of birds; *10*, *31*, *33* for depictions of birds facing crosses (*§ 5.2*); *151*, a possible depiction of a bird above a plant (*§ 5.6.2*); *169b*, *170b*, *171a*, *177* for depictions of birds inside inhabited scrolls (*§ 5.7*)

Peacocks

The best-preserved representation is that of a peacock (*Cat. 94*). It is represented facing leftwards, with an S-bent neck and folded train. It is almost complete, lacking only the legs and the tips of the train feathers. It does not have the head crest, but it seems that the artist never rendered it. It is painted with just a few colors: green, white, and a few shades of ocher and red used for the plumage on the flank and the tail feathers. Among all the fragments of paintings from Porphyreon, it is one of the few where blue color was applied (see above, *§ 3.8.2*) to paint the breast, the belly, and the eyespots on the train. The bill and the legs are painted with a deep red. The bird is represented among plants with long, blunt, gently curved, green leaves.



Fig. 5-33. Pair of peacocks above the headpiece of the letter of Eusebius; Abba Garima III (AG I), fol. 10r; 330–650; Monastery of Ǝnda Abba Garima, Ethiopia



Fig. 5-34. Two peacocks perching on an arch above three saints; wall painting (watercolor copy); tomb at Antinoe; 6th century

A very similar image of a peacock, also sitting among plants but facing right, was found by Saidah in 1975 (*Cat. 95*). A fragment of a peacock's train rendered similarly to *Cat. 94* can also be seen on *Cat. 77*, above the "gemstone" band.

Another fragment that may also be a representation of a peacock comes from the residential district (*Cat. 96*). It shows the upper body of a bird with an S-bent neck. The plumage is painted with red, pink, and yellow with some details executed in gray and green. This fragment differs in style and artistic quality from the two fragments just described; the paints are carelessly mixed, and the colors appear to be applied rather randomly. Only the characteristic posture with the emphasized S-bent neck, very similar to *Cat. 94* and *Cat. 95*, suggests its identification as a peacock.

Representations of peacocks (*Pavo cristatus*) are countless in various media of Roman-period and Late Antique art. Their Eastern origins, high price, and splendorous, exotic appearance made these birds a favored motif in the rich mural decorations of Roman interiors (Toynbee 2013: 250–253; Arnott 2007: 342–343; Zarmakoupi 2014: 182–184). They are depicted perched on ledges of monumental, illusionistic architecture in Second Style paintings (e.g., in the *oecus* of the Villa Poppea at Oplontis; Ling 1991: 28, Fig. 26) or in fictive gardens popular in Third and Fourth Style decorations (Ling 1991: 152; Mattusch 2008: 175, Fig. 176). Associations with immortality and Elysium gained them popularity in funerary wall painting in both the East and the West (Toynbee 2013: 252; *Table 5-1:79–82*).

The peacock as an emblem of everlasting life was adopted by early Christian symbolism and is often featured in the monumental and minor arts. One of the most common compositional formulas on floor mosaics features a pair of peacocks facing each other with, for example, an inscription, a *kantharos*, or another object between them, or perching on the lip of a vessel [*Table 5-1:83–86*]. On book covers and headpieces of illuminated manuscripts they are usually depicted sitting on top of an arch [*Table 5-1:87–89*; *Fig. 5-33*; see below, *Fig. 6-15*]. This compositional formula was also employed in a wall painting from a tomb at Beit Guvrin (4th/5th century; Moulton 1921–1922: Pls 2, 4) and Antinoe (Salmi 1945; Zibawi 2003: 21–22, Fig. 9) [*Fig. 5-34*].

The wall paintings from Beit Guvrin and Antinoe and illuminated manuscripts provide the best parallels for *Cat. 94* from Porphyreon, the particular shape of which betrays its location above an arch or an apse. It is almost certain, by analogy, that this peacock was accompanied by a pendent, rightward-facing bird. One should recall here Renan's description of the wall paintings he discovered at Nabi Younes. Among them were "peacocks facing each other on top of finely decorated arches", which he compared to Byzantine codices (Renan 1864: 510). The compositional arrangement of *Cat. 95* and *Cat. 96* could not be determined.

Partridges

Partridges are another identifiable species of bird represented on wall paintings from Porphyreon. In the best preserved depiction (*Cat. 97*), the bird is shown facing right; it has a plump body, a bottle-green flank and head, ocher breast and belly, black gorget, and black streaks on the plumage. Its bill, leg, and eye ring are painted with dark red. The bird is highly reminiscent of the chukar partridge (*Alectoris chukar*) or its close relative, the rock partridge (*Alectoris graeca*), both common in the southern and eastern Mediterranean (Arnott 2007: 254–265). The bird

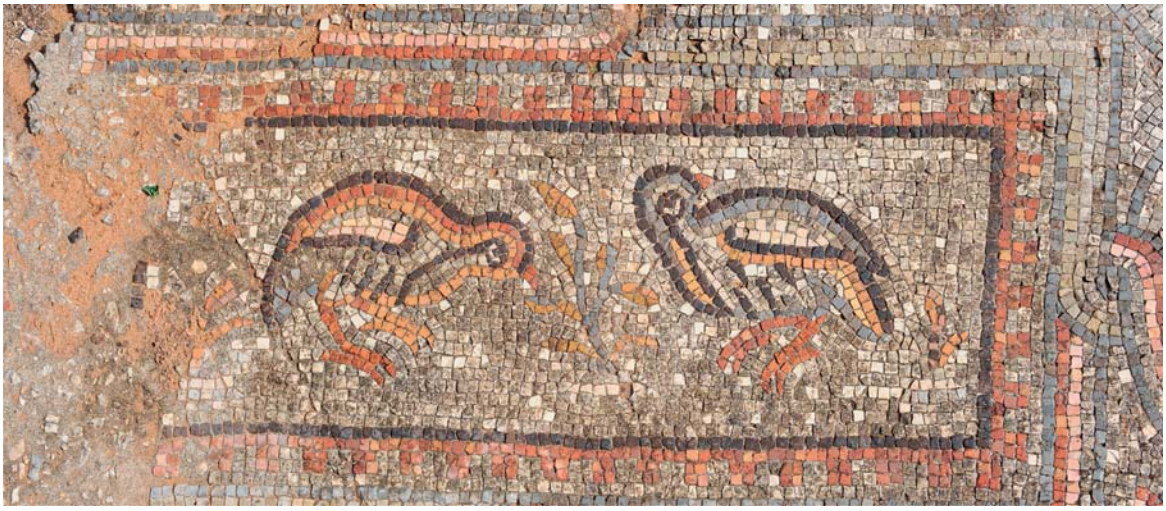


Fig. 5-35. Partridges pecking on a plant; floor mosaic; church at Khaldé-Choueifat; late 5th century; on view in the gardens of the National Archaeological Museum in Beirut

is depicted pecking on a plant with long blunt leaves and a small tendril. Part of the head of a leftward-facing partridge, rendered in the same style as *Cat. 97*, can be seen on *Cat. 98*. The two birds likely faced each other in a symmetrical arrangement on two sides of an opening in a wall (e.g., niche, doorway, or window) because in both instances the plaster is folded over the edge that the bird is facing [see below, *Fig. 6-9*]. Another pair of partridges is depicted flanking symmetrically a cross mounted on a decorative base (*Cat. 31*). The birds have rotund bodies, plumage in various shades of brown, black gorgets, and red legs. They raise their heads toward plants with green and ocher leaves springing between them and the cross. The head and upper body of a partridge appears also on *Cat. 99*. The bird is painted with a buff color with reddish-brown contours and has a distinctive white streak running down from its eye. It is represented not among plants, but directly facing a medallion, possibly with a cross inside it.

Partridges appear in ancient art as early as in the Bronze Age (Arnott 2007: 256). They were immensely popular in Roman-period and Late Antique wall and floor decorations. In Roman wall paintings they are featured on some of the Third and Fourth Pompeian Style depictions of fictive gardens, such as that in the House of the Golden Bracelet at Pompeii (Ciarallo and Capaldo 1991: 28). Iconographic schemes involving partridges, commonly employed on floor mosaics, show them pecking on bunches of grapes, often inside vine scrolls, pecking on plants or seeds [*Fig. 5-35*], with chicks, or in cages [*Table 5-1:79, 90–95*]. Like peacocks, partridges are often depicted in pairs, facing each other or flanking an object placed between them [*Table 5-1:96–100*].

Representations of partridges from Porphyreon generally follow the iconographic scheme of two birds in antithetic position. The birds were depicted facing an opening in a wall (*Cat. 97*, *98*), a cross (*Cat. 31*), and a medallion, possibly with a cross (*Cat. 99*). The iconographic formula of birds facing a cross is paralleled by two fragments of wall paintings found in the narthex of the church at Zahrani [see above, *Fig. 5-5*].

Pigeon-like birds

One of the representations is of two pigeon-like birds pecking on the ground among clumps of plants (*Cat. 100*). The birds have rotund bodies with light green plumage, ocher flanks with rufous streaks, short necks and legs, and short, red, slender bills. The green plumage is characteristic of green pigeons, a genus of the *Columbidae* family, several species of which occur in Africa. However, the green plumage could have been simply a product of the artist's imagination. The birds could also be turtle or ring-necked doves (*Streptopelia turtur* and *S. capicola*), although they appear somewhat too plump for these species and they lack the characteristic stripe on the sides of the neck.

Species of pigeons (*columbae*), ring-necked doves (*palumbae*), and turtle doves (*turtures*) were well-known in the ancient and Late Antique Mediterranean (Toynbee 2013: 258–259). Similarly to peacocks and partridges, they appear in Roman-period wall paintings, in depictions of illusionistic gardens, for example, in the House of the Golden Bracelet at Pompeii (Mattusch 2008: 175, Fig. 176). However, one of the most common iconographic motifs features doves perched on the lip of a bowl of water. A celebrated example of this subject is an *opus vermiculatum* mosaic from the House of the Doves at Pompeii. Pigeon-like birds are sometimes featured in funerary wall paintings [*Table 5-1:79, 101*].

On mosaic pavements they are less common than partridges. They are encountered occasionally in medallions or compartments of grid mosaics [*Table 5-1:102–104*], although they are rarely represented pecking on the ground or plants. A rather general parallel for the fragment from Porphyreon is a depiction of two facing pigeons, both pecking at a plant, found on a floor mosaic in the bema of the Church of St George at Khirbet al-Mukhayyat (535/536; Talgam 2014: Fig. 278). Two pigeons pecking at date palms were also represented on a mosaic in one of the rooms of the Villa at Jenah (late 5th century; Chéhab 1957: 61; 1959: Pl. XXVII). A pigeon stooping to something on the ground also appears in the corner of a small landscape with animals, depicted in the lower church at Khan Khaldé [see below, *Fig. 5-53*].

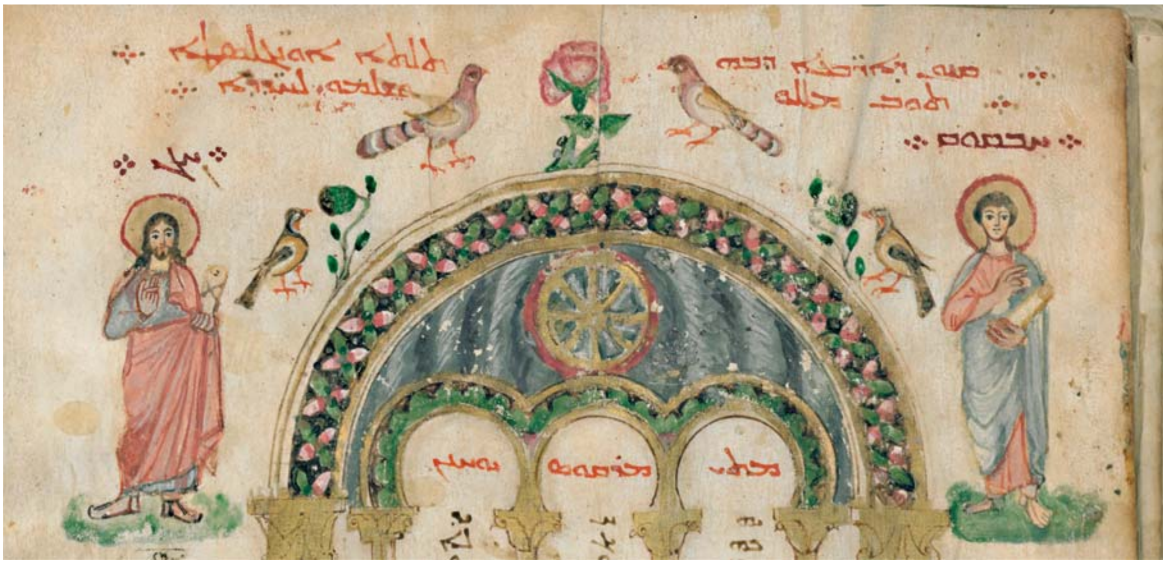


Fig. 5-36. Two pigeons or doves flanking a flower; Rabbula Gospels (cod. Plut. I, 56), fol. 7v; 586; Biblioteca Medicea Laurenziana, Florence

Examples of pigeons and doves depicted in illuminated manuscripts do not provide any satisfactory parallels, because they follow a schematized formula of two birds, still and facing one another [*Table 5-1:105–106*; *Fig. 5-36*].

Wading birds

Two fragments discovered in 1975 depict long-legged wading birds. The first (*Cat. 101*) is a bird with a rotund corpus, legs and a short tail. The plumage is pink, while the contours, the shape of the flank, and the legs are dark pink. The color suggests a flamingo, most likely the greater flamingo species (*Phoenicopterus roseus*), native to the Middle East, southern Europe, and Africa. The bird is depicted against a beige background. There is a brown horizontal line above it and some unidentified greenish shape (plants?) to the left of it.

The other representation is of an aquatic bird (*Cat. 102*), but the species is harder to determine. The bird is long-legged and long-necked; it has a uniform gray plumage,[13] red legs with pronounced joints, and down-curved red bill. It is pecking on a standing, vertical, gray shape. While the color of the plumage would be typical of a number of species of cranes or herons, the curved bill is characteristic of the ibis. The bird could actually be an artistic combination of several characteristics of different water birds. Here, the bird is represented against a white background, unlike *Cat. 101*, which suggests that these two fragments may have pertained to two different compositions.

Cranes, herons, ibises, flamingos, storks and other species of waders and birds inhabiting wetlands populate Nilotic landscapes depicted on floor mosaics (Toynbee 2013: 243–247) [*Table 5-1:107, 108*; *Fig. 5-37*]. According to Choricius, images of "[v]arious kinds of birds that often wash in that river's [Nile's] streams" decorated the aisles of the Church of St Stephen in Gaza (*LM* II, 50, 51; quoted after Mango 1986: 72; see also Polański 2009). An example of a painted Nilotic landscape in a Christian context comes from a cistern turned into a chapel(?) at Salamis in Cyprus (Bardswell and Soteriou 1939; Sacopoulo 1962, Figs 13–15). A long, horizontal panel with different animals bathing and wading among lotuses and other aquatic plants was located on the east wall of the presumed chapel [*Fig. 5-38*]. It was surmounted with a small imago clipeata of a bearded Christ with a cruciform gemmed halo. Six apotropaic inscriptions appeared on the walls of the cistern (see below, *§ 6.2.6*). The paintings, probably no longer extant, were dated to the mid-6th century based on the type of representation of Christ.

On floor mosaics, wading birds also appear in compartments of grid compositions and in inhabited scrolls [*Table 5-1:109–110*]. However, the two birds depicted in the wall paintings from Porphyreon have no apparent compositional confines. Therefore, it is plausible that the fragments were part of a Nilotic landscape.

[13] Other colors might have been present but have all but disappeared apparently due to the abrasion of the paint layer.



Fig. 5-37. Wading bird among aquatic fauna; floor mosaic; Church of Multiplication of Loaves and Fishes at Tabgha/Heptapegon; second half of the 5th century



Fig. 5-38. Wall painting of Nilotic landscape; cistern at Salamis; 6th century (watercolor copy by M. Bardswell, 1937)

Parakeet

The rear half of a bird's body seen on *Cat. 103* is represented with short red legs and long straight tail feathers. The plumage is light blue, the flank beige. The bird is depicted against the background of plain white plaster, with a slightly curved gray and ocher strip of ground below its feet.

It is very likely that the fragment in question depicts a parakeet-like bird [*Fig. 5-39*]. Three species of parakeets originating from India (*Psittacula cyanocephala*, *P. eupatria*, and *P. krameri*) were known to the Greeks and Romans, who imported them and kept them as pets (Toynbee 2013: 247–249; Arnott 2007: 292). None of these species has either blue plumage or red legs, but ancient artists apparently depicted parakeets with such features with little concern for reality (see, for example, a pair of parakeets, one blue, one green, and both with red legs perched on the lip of a bowl in a mosaic from Pompeii, now in the National Museum of Naples; Inv. No. 9992).

Iconographic formulas involving parakeets that appear on mosaic pavements are similar to those of the species of birds discussed above. They may be depicted in inhabited scrolls, in medallions, inside compartments of grid mosaics, or in more complex scenes featuring various animals [*Table 5-1:111–116*]. In illuminated manuscripts, parakeets, just like the other bird species discussed above, appear above the headpieces [*Table 5-1:117*].



Fig. 5-39. Pair of parakeets facing each other; floor mosaic; Church of the Apostles at Madaba; 578

Pheasant

Two or three long, slightly curved, bottle-green tail feathers with black streaks are represented on *Cat. 104*. The lowermost feather touches an unidentified oblong shape painted with khaki green, ocher, and gray colors.

Long, black-streaked tail feathers, not necessarily green, are characteristic of pheasants (*Phasianinae*), expensive birds bred by wealthy Greeks and Romans for consumption (Toynbee 2013: 255; Arnott 2007: 269). Despite their popularity and associations with luxury, their depictions in Graeco-Roman art are not as plentiful as in early Christian wall and floor decorations. Some of the relatively early examples include the vault mosaic of Santa Costanza (second half of the 4th century; Stern 1958: 202, Figs 28, 38) and the mosaic of the Baptistery of San Giovanni in Fonte in Naples (second half of the 4th century; Ferri 2013: Pl. 10). In both cases, pheasants are in the company of peacocks, partridges, doves, and parakeets—the same set of species as on the wall paintings from Porphyreon.

It is impossible to determine the iconographic type of the depiction in question due to its fragmentary condition. Nevertheless, one should note that pheasants, like peacocks, were often featured on floor mosaics in honorific iconographic schemes. They are frequently represented as a pair facing each other, very often flanking or perching on a *kantharos* or another type of vessel [*Table 5-1:118–120*; *Figs 5-40, 5-41*].

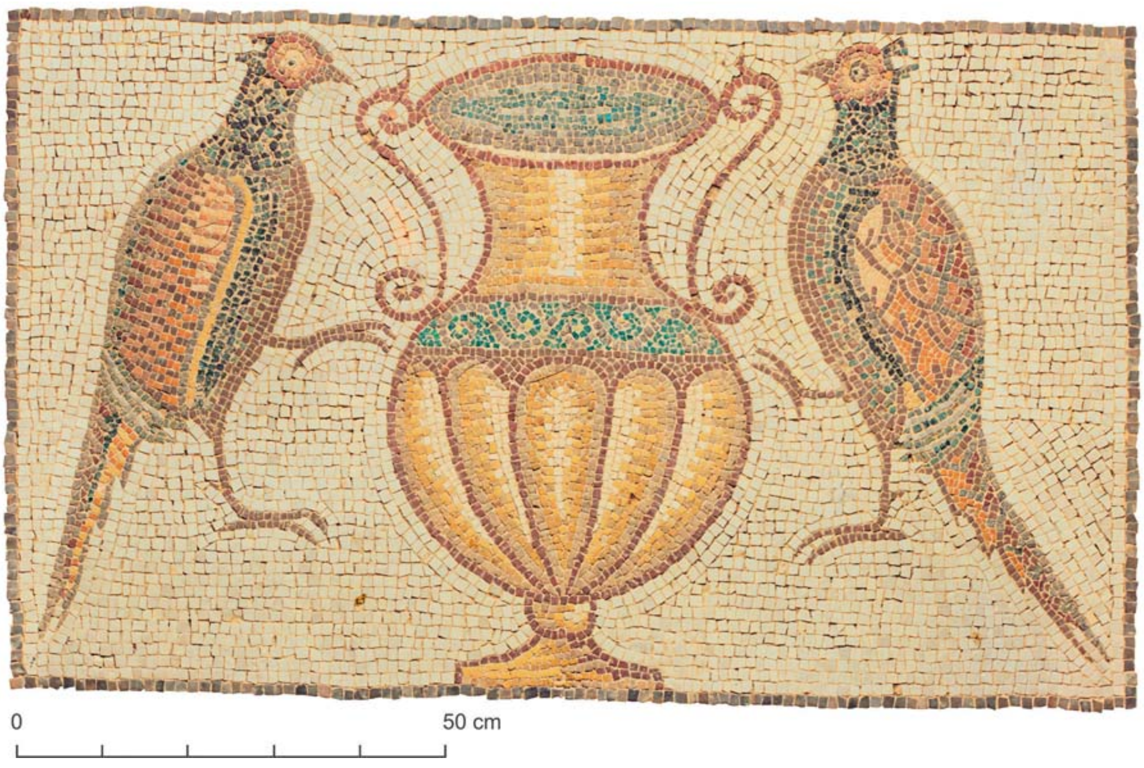


Fig. 5-40. Two pheasants flanking a *kantharos*; floor mosaic from Basilica Q; late 5th or 6th century; on view at the Beiteddine Museum



Fig. 5-41. Pheasant and peacock facing a silver vessel; floor mosaic (watercolor copy); lower church at Khan Khaldé; mid-5th century

Red, linear depictions of birds

Four depictions of birds were executed in a monochrome linear style. Identification of the species is difficult for lack of details and coloring of the plumage, as well as overall appearance which does not bear much resemblance to the real bird. *Cat. 10*, which shows a simple red cross, also depicts a bird facing the cross, its body large and rotund, the flank disproportionally small, a head-crest, and two ascending straight lines representing the tail. *Cat. 105* shows the breast, head, and part of the flank of a similar bird. *Cat. 106* represents a small spotted bird (head missing), standing on a strip of red ground and facing what looks like a plant. The bird on *Cat. 107* resembles a pigeon.

The bird on *Cat. 108* was depicted facing some object, possibly a cross set upon a decorative base, the lower part of which is visible on the preserved plaster.

5.5.2 Fish

The only representation of a fish among the wall paintings from Porphyreon was discovered in the residential district in 1975 (*Cat. 109*; see Saidah 1977: 42); it is now missing. Saidah interpreted it as the whale that swallowed the Prophet Jonah, citing a local tradition that the prophet was spat out by the whale in the area of Porphyreon (thus the local toponym, Nabi Younes, "Prophet Jonah"). According to Saidah, the two lines coming out of the fish's mouth were Jonah's legs. However, turning the fragment so that the head of the fish points up leads to the observation that the animal could have been shown hanging.

The iconographic motif of game hanging from a hook occurs in classical art, for example, on a Second Style wall painting from Pompeii in the Naples Archaeological Museum (Inv. No. 8594; Ling 1991: 34, Fig. 32). Similar representations of fish hanging from nails were painted on two sides of an arcosolium on the west wall of the Tomb with a Biblical Scene in Lohamey haGettaot (Michaeli 2009: 133, Figs 201–202) [*Fig. 5-42*].

Whilst a religious meaning of the fragment from Porphyreon cannot be excluded, fish depicted in this way suited a seaside village, where fishing and hanging the catch from nails was doubtlessly daily practice. Moreover, should Saidah's iconographic interpretation be accepted, we would be dealing with a surprisingly schematic rendering of the alleged legs of the prophet contrasting with the painterly and rather realistic rendering of the fish. The representation in question could be a simple still life or it could be charged with Christian symbolism—there is no way of telling.



Fig. 5-42. Fish hanging from hooks above an arcosolium; wall painting; Tomb with a Biblical Scene in Lohamey haGettaot; 4th/5th century

5.5.3 Beasts

Catalog numbers

110–121; see also *126*, *127* for possible depictions of beasts; *137*, a possible depiction of a beast among plants (*§ 5.6*); *170a*, a depiction of a dog in inhabited scrolls (*§ 5.7*); *181–186* for depictions of animals in genre(?) scenes (*§ 5.8*)

Eight of the 12 fragments depicting beasts represent herbivore animals. Two are carnivores and the remaining two cannot be identified.

Sheep/ram(?)

An almost complete representation of a quadruped animal is preserved on *Cat. 110*. It depicts a buff-colored animal with thin legs characteristic of ungulates, and with a sagged rounded tail. Its head resembles a dog's head to some extent; its profile curves gently from the top of the head towards its nose. The animal has a large, human-like eye, relatively long, somewhat pointy ears, and red horns(?). A dark gray line connects the eye with the muzzle. Its coat features reddish crescents arranged in sets of three, probably intended to represent a curly pelage. Red curved lines are also visible on its tail. The animal is either standing or striding among plants: faint remains of green leaves are visible in front of it and below its belly. It is depicted against a white background.

The animal represents a peculiar mix of physical features that could be characteristic of a number of species and is thus difficult to identify. Among the numerous representations of four-legged animals from Late Antique floor mosaics, similar sets of features appear on images of sheep, rams, and lambs. They tend to have robust bodies and thin legs, like the pair of rams represented on the main mosaic panel in the nave of the Church of the Apostles at Madaba (578; Piccirillo 1997: 106–107, Figs 81, 87), or a pair of sheep facing a tree in the presbytery of the Church of the Holy Martyrs Lot and Procopius in Khirbet al-Mukhayyat (557; Piccirillo 1997: 164–165, Fig. 214).

Sheep and lambs on floor mosaics usually have buff coats with darker, reddish streaks running down their backs, belly, and limbs. However, two rams facing a *kantharos*, represented on a mosaic in the lower Chapel of the Priest John at Wadi ʻAfrit, have red dashes on their fleece (Piccirillo 1997: 176, Fig. 237). The same feature appears on a depiction of a sheep from the Basilica of Moses on Mount Nebo (the animal may at first glance resemble a tiger but does, in fact, have hoofs) [*Fig. 5-43*]. It is possible that the red crescents visible on the pelage of the animal from Porphyreon were meant to render fleece, in similarity to the examples here described.

A sagged rounded tail is a typical feature of fat-tailed sheep, a type which comprises a number of breeds characterized by a large tail accumulating deposits of fat. One such breed is the Awassi sheep from the Syro-Arabian desert, which remains the most common in Arab countries. Virtually all sheep represented on mosaic pavements of the Late Antique Levant have such long, rounded tails. This feature can be seen in the previously cited representation of lambs from the Church of the Apostles at Madaba, or the depiction of sheep in the second lower register of the Old Diakonikon mosaic at Mount Nebo (530; Piccirillo 1997: 146, Fig. 166).

The presumed horns on top of the head of the animal in question are too damaged to be discerned. The long, somewhat pointy ears, pointing in opposite directions, are paralleled by



Fig. 5-43. Sheep (note the hoofs) with buff coat with red triangles; floor mosaic; Basilica of Moses on Mount Nebo; 6th century



Fig. 5-44. Reclining ram; floor mosaic (watercolor copy); upper Chapel of the Priest John at Wadi ʿAfrit; 565



Fig. 5-45. Sheep nibbling foliage; floor mosaic; church at Kissufim; 576

a floor mosaic depiction of a reclining sheep inside an acanthus scroll in the upper Chapel of the Priest John at Wadi ʿAfrit (Piccirillo 1997: 174) [*Fig. 5-44*].

Other details that the animal on *Cat. 110* has in common with mosaic representations of sheep are the gently curved profile of its head, its flat nose, and a dark line connecting its muzzle to the eye. The most peculiar detail of the painting from Porphyreon is the human-like eye of the beast. This feature also appears in two representations of lions (*Cat. 118*, *119*).

The compositional context of this depiction is suggested by plants visible in front of it and under the animal's belly. Sheep and lambs on Eastern Mediterranean floor mosaics are often represented among more or less elaborate flora, especially in pastoral scenes. They may be standing next to plants or nibbling on tree foliage [*Fig. 5-45*], or striding among trees and clumps of plants. Occasionally, sheep are shown tied to a tree in a symbolic representation of Abraham's sacrifice [*Table 5-1:121–122*].

Other hoofed animals

On *Cat. 111*, an animal is shown raising its proper front left leg. Only the front part of the animal (without the head) is preserved. The body appears relatively corpulent in comparison to the thin legs. The animal has a reddish-brown coat with a number of dark red dashes. Plants with blunt green leaves are depicted below the belly and in front of the animal; the background is white. The execution of the painting, for which wide brushes were used, seems to have been very swift, even careless. This fragment shares certain features, like the color and "dashes" on the pelage and the body proportions, with *Cat. 110* and may thus be tentatively identified as a lamb.

Meanwhile, *Cat. 112* depicts the head of what might be a doe. The ears are long and standing, with rounded tips pointed in opposite directions, the muzzle rounded, the eye large and stylized. The coat is dark yellow with a series of brown and white spots running over the top of its head and neck, possibly continuing along its spine. The animal raises its head to reach for a long leaf from a green plant. The background is white. The fragment could depict a gazelle, although gazelles usually have horns. Therefore, it is either an inaccurate rendering of a gazelle, or the painting represents a doe. Incidentally, it is difficult to find an image of a doe-like or gazelle-like animal without horns on mosaic pavements. One such specimen comes from a floor mosaic in the "four-pillar chapel", interpreted as a baptistery, of Basilica A at Resafa (Ulbert 1986: 100–101). A doe-like animal without horns is depicted there among fruit-bearing trees, possibly plucking leaves from a plant [*Fig. 5-46* left].



Fig. 5-46. Other hoofed animals: left, doe(?); floor mosaic in the "four-pillar chapel" of Basilica A at Resafa; late 5th century; right, gazelle; floor mosaic (watercolor copy); the Theotokos Chapel on Mount Nebo; 6th century

Five other painted fragments represent buff- or brown-colored legs or backs of hoofed animals, possibly stags or gazelles, executed against plain white backgrounds. *Cat. 113* depicts the lower front part of an animal standing next to a plant painted in a brilliant green. The pelage is in a relatively uniform buff tone with greenish contours to outline the animal's breast and the shape of its leg. *Cat. 114* represents the rear part of an animal. The hind leg appears to be stretched to the back as if in the motion of running. The animal is reddish-brown, with black and greenish paint used to delineate the leg and the haunch. Also, *Cat. 115* depicts the hind legs of a brown animal, which appears to be running or trotting among clumps of plants with long green leaves.

Cat. 116 and *Cat. 117* show large round haunches of buff-colored animals with small tails, characteristic of representations of gazelles [*Fig. 5-46* right]. The animal represented on *Cat. 116* has a series of dark dots running along its spine, similarly to the doe-like animal on *Cat. 112*. Such a dotted pelage appears on mosaic representations of stags, does, and gazelles [*Table 5-1:123–125*].

The animals may be taken for hoofed herbivores, even if the depicted species is unidentifiable due to the fragmentary condition of the paintings. They appear to be standing still, save for *Cat. 114* and *Cat. 115* where they seem to be shown in motion. Also, the broader context of these depictions is unclear, save for the occasional presence of plants around them. The motion of plucking leaves seen on *Cat. 112* finds parallels in mosaic representations of gazelles and other herbivores [*Table 5-1:126–128*; see *Figs 5-45*, *5-53*]. Also, the pose with one of the front legs lifted and bent at the knee, seen on *Cat. 111*, often appears in heraldic compositions featuring rams or stags [*Fig. 5-47*].



Fig. 5-47. Two rams flanking a pomegranate tree, each with one of the front legs lifted; floor mosaic; chapel adjacent to the Church of the Apostles at Madaba; 578

Lion

Cat. 118 preserves one of two certain representations of predators. It depicts a large part of a lion's body and its head. The beast has an orange pelage and red mane. Some details of the muzzle are painted in light pink. A fragment of a large human-like eye with a pronounced pupil is visible at the edge of the preserved plaster. Even though its legs are not visible, the lion seems to be standing still. It is depicted against a white background. The painting was rendered with quick strokes of a wide brush, applying the paint rather thickly in comparison.

Representations of lions in ancient art are countless due to the various symbolic meanings and biblical associations evoked. They are featured in a wide variety of artistic media, including mosaics, paintings, sculpture, and minor arts (Toynbee 2013: 65–69). Within the realm of the Late Antique floor mosaics, lions appear in four principal iconographic contexts. The first is that of hunting scenes where lions (male and/or female) are either being hunted by men or attack their prey [*Table 5-1:129–131*]. Next, there are lions peacefully facing other animals in a display of *philia* ("friendship"; Hachlili 2009: 204–205; *Table 5-1:132, 133*) and lions among various other species of animals, as in depictions of Orpheus, King David, or Adam [*Table 5-1:134–139*]. Finally, there are antithetic pairs of lions flanking a sacred object, an amphora, or a dedicatory inscription (Hachlili 2013: 436–443; *Table 5-1:140–143*). This last, heraldic type of representation is common on synagogue mosaic pavements and in Jewish art in general, drawing from the lion's associations with Judah and Israel in the Scriptures (e.g., Genesis 49:9; Numbers 23:24).

The representation from Porphyreon is too small for the compositional context to be recognizable. The static pose of the beast rather excludes a hunting scene. It could either be a peaceful representation of a lion among other animals or a heraldic composition.

Lioness

A leftward-facing head and part of the neck of a feline is depicted on *Cat. 119*. The pelage is dark yellow except for the neck, which was rendered with several reddish strokes, possibly meant to emphasize the shadowing. The animal has a white eye with a small pupil resembling a human eye, and a curved eyebrow. A red tongue is visible in its open mouth and sets of white teeth line the upper and lower lips. The nose is rounded and set relatively high. The animal, depicted against a white background, stands next to a plant with long green leaves.

The rather peculiar combination of features and somewhat human appearance makes the species difficult to recognize. Nevertheless, some of the details suggest that it could be a lioness, an interpretation corroborated by mosaic representations of lionesses which often show them with an open mouth, baring their teeth. The teeth and the nipples were in fact, the two principal features used to distinguish lionesses, possibly due to the lack of other distinctive traits, such as a lion's mane or the spotted pelage of a cheetah. A good example of such a portrayal is a floor mosaic from the church at Kissufim showing a lioness with a cub striding among plants (Cohen 1993; Talgam 2014: 104) [*Fig. 5-48* top]. A dashing lioness depicted on a mosaic from the basilica at Chhim does not have marked teeth, but a red tongue can be seen in its open mouth, very much like in the case of the painting from Porphyreon (Waliszewski 2012; Hélou 2019: 96–101) [*Fig. 5-48* bottom].



Fig. 5-48. Depictions of lionesses on floor mosaics: top, with a cub; church at Kissufim; 576; bottom, charging lioness; basilica at Chhim; 6th century; on view at the National Archaeological Museum in Beirut

Other beasts

The interpretation of *Cat. 120* and *Cat. 121* poses some difficulties. *Cat. 120* depicts part of the head with a small, rounded ear, a relatively long neck, and part of the back of an animal. The animal has a yellow pelage with reddish-brown bands marking the tip of its ear and the curve of its jaw, and running along the top of its neck and spine. A few white specks are painted on top

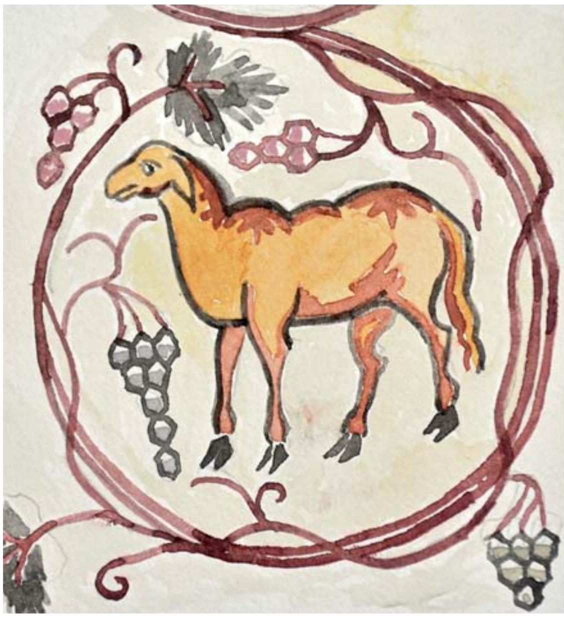


Fig. 5-49. Sheep; floor mosaic (watercolor copy); Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat; 557



Fig. 5-50. Hare with spotted pelage; floor mosaic; Northern Church at Hit; 6th century

of the brown color on the back. The animal is represented against a white background. The rendering is rather careless. The reddish-brown and white details are quite casual, applying wide brushstrokes on top of a yellow base color. Such small, rounded ears are typical of representations of lionesses (see above) and other predator felids. However, the relatively long neck and dark band running down the neck and back of the animal in question go against such an identification. Instead, it is again reminiscent of some mosaic depictions of sheep [*Fig. 5-49*]. This fragment may be a somewhat unsuccessful rendering of either a hoofed animal or a felid.

In the other fragment (*Cat. 121*), one can see part of the haunch of an animal with a spotted red coat and small fluffy tail. The haunch is slightly sagged. The background visible above the back of the animal is white. Images of animals seen on floor mosaics do not provide immediate parallels for this fragment. The small, fluffy tail rules out a depiction of a cheetah or any other species of felids with a spotted coat. Short tails and spotted coats sometimes appear on representations of hares [*Fig. 5-50*], as well as on stags and gazelles, as discussed above. Both hares and caprids are usually represented with a tan coat instead of a red one.

5.5.4 Fragments

A number of fragments of wall paintings may be part of animal representations, judging by the details and color combinations reminiscent of the rendering of feathers and the pelage. This group comprises the following fragments:

- *Cat. 122*: bottle-green breast of a bird(?); a strip of yellow ground is visible at bottom left; the bird is facing left, towards a green plant (only one leaf survives).

- *Cat. 123*: bird(?); gently curved outlines of the shape, painted with a few shades of pink, with somewhat darker contours and scattered small red spots. Thin, yellow lines adjoin the shape. Depicted against a white background.
- *Cat. 124*: part of a white background bordered on two sides by a slightly convex light gray shape. Red lines evoke representations of a bird's feet (a bird in flight?).
- *Cat. 125*: green feather-like elements with orange contours (peacock's train?), set above a green strip (ground?).
- *Cat. 126*: round yellow shape with multiple small reddish-brown spots painted on it; gray contours (an animal with a spotted pelage?).
- *Cat. 127*: fragment of an orange color field with dark gray contour, set against a white background. A few pink and white dots on top of the orange color (an animal with a spotted pelage?).
- *Cat. 128*: blue breast of a bird (peacock?) depicted next to a green plant.
- *Cat. 137*: brown and gray shape resembling a hind leg and haunch of an animal reclining among plants.
- *Cat. 151*: shape reminiscent of a bird's legs, depicted above a clump of plants.

5.6 Vegetal motifs

Catalog numbers

128–168 and a representation of a flower grid on fragments *171b*, *173b*, *174b*, *175b*, *176b*; see also *31*, *37b* for plants accompanying depictions of jeweled crosses (*§ 5.2*); *94–98*, *100*, *110–115*, *119* for plants appearing in depictions of animals (*§ 5.5*); *169–171a*, *172*, *173a*, *174a*, *175a*, *176a*, *177*, *178* for vine and acanthus scrolls, and various fruit inside inhabited scrolls (*§ 5.7*); *180*, *181*, *183*, *185*, *186* for simplistic plants in genre(?) scenes (*§ 5.8*)

A considerable number of fragments of wall paintings feature depictions of green plants, foliage, flowers, and fruit trees. The plants are rather generic, unlike the animals, the species of which can be identified at times. They show an advanced simplification of forms and reduction of details. The only exceptions are fragments showing pomegranates, pears, and a palm tree; the details in these cases allow these representations to be recognized.

5.6.1 Green plants and red flowers

Several fragments of wall paintings show plants with long, gently curved, blunt leaves (*Cat. 128–136*). Some of them appear next to depictions of animals (e.g., *Cat. 31*, *94–98*, *112–115*). They tend to be painted with quick, spontaneous brushstrokes and using only one shade of green. Particular leaves do not connect to the stems, and in some cases there is no stem at all.

The plants grow from a schematically rendered ground, usually represented by a wide strip of color. The ground can be yellow (*Cat. 137–139*), red (*Cat. 140*), ocher-greenish (*Cat. 141*), or orange (*Cat. 142*). Judging by the brushwork, the ground was not represented as a long, continuous line, but rather as short lines appearing below individual representations of plants

(and animals?). Such clumps of generic plants growing from strips of ground may have been used to suggest landscape, as often seen on Late Antique floor mosaics, for example, in depictions of animals, agricultural activities, hunts, or Nilotic scenes [*Table 5-1:144–146*; see ***Figs 5-32***, ***5-46*** left].

A few depictions of plants from Porphyreon bear simple red flowers composed of a pink center and three red petals above it (*Cat. 143*, *144*), a few irregular red brushstrokes over a pink center (*Cat. 37b*, *136*, *145*, *147*), single red roundels (*Cat. 148*), or a yellow center with red petals (*Cat. 146*). *Cat. 149* shows elongated red flowers set on a plant with narrow and long dark green leaves.

Such schematized red flowers are featured in many landscapes depicted in Roman-period and Late Antique mural and floor decorations (Barbet 2014). In Graeco-Roman funerary painting they symbolize the afterworld (Michaeli 2009: 136–137); for example, in the Djel el-Amad tomb the ceiling is decorated with randomly scattered red flowers with birds among them (Barbet 1995: 48; Fig. 6) [*Table 5-1:147–149*]. The afterlife symbolism of red flowers continued into Christian art as an emblem of Paradise [*Table 5-1:150, 151*]. Painted depictions of red flowers on long, straight, trident-shaped stems can be seen in the Grotto of Conon in Nazareth, devoted to the veneration of martyrs (Briand 1982: 30–32, Fig. on page 31); a representation of a wall hanging with scattered floral motifs decorated the "venerated hall" of the *domus ecclesiae* in Caparnaum (Testa 1972: 13–48; Corbo 1975: 66–70); and in Caesarea, three orans saints were represented among shrubs with red flowers (Avner 1999: 109–118, Col. Figs 1a–1b, 5) [see above, *Fig. 5-31*]. Scattered generic flowers also appear as an element of the landscape on mosaics depicting secular subjects, such as hunts [*Table 5-1:152, 153*].

5.6.2 Foliage and fruit trees

A few representations of vegetal motifs are somewhat more elaborate in the details than the generic green plants and red flowers described above. They are characterized by an expanded color palette, paint layer buildup consisting of two or three layers of colors, and an expressive painting manner.

Dense foliage painted with several shades of green and ocher is depicted on *Cat. 150*. A trace of red color at the edge of the surviving plaster suggests a fruit or flower set among the leaves. A pair of fragments (*Cat. 151*, *152*) shows lush foliage executed with fluid green and ocher paint, and with small round red flowers set among the leaves. An item (bird?) appears in the upper left part of *Cat. 151*, while the lower part of *Cat. 152* is occupied by brown ground(?). These two fragments were symmetrically located on two sides of an aperture in the wall—a window, doorway or niche, as both have plaster folded over the edges; the plant depictions are right next to these vertical edges.

Cat. 153–155 represent ripe pomegranates set in dense foliage, recognizable thanks to their crown-shaped tips. They are of a similar style regarding brushwork and color tones. The fruits are dark red with some lighter reflections. They have thin orange stems, which is a mistake because the fruits of the pomegranate do not have stems but are set very close to the branches. The leaves were painted with a semi-translucent, cool green paint. *Cat. 156* also depicts pomegranates, but is executed very crudely and schematically. Foliage with pomegranates also appears on three fragments documented on the 1975 slides (*Cat. 157–159*). The leaves are painted with bluish-

green and ocher paint. *Cat. 159* probably shows gently curved, stylized branches growing from a trunk. *Cat. 160* retains traces of foliage in several shades of green and two bulbous fruits, possibly pears. The fruits are dark yellow and have red contours and stalks. The plaster is heavily abraded, so it is difficult to determine the shape and arrangement of the leaves.

Fruit trees are often featured on mosaic pavements of early Christian churches in Syro-Palestine, especially in hunt and pastoral scenes [*Table 5-1:154, 155*]. A mosaic from Basilica A at Resafa shows animals striding and reclining among various trees (Ulbert 1986: 101, Pl. 39.1) [see below, *Fig. 6-11*]. Simplified versions of such landscapes depict animals standing among or facing trees [*Table 5-1:156, 157*; see above, *Fig. 5-47*]. The two species of trees that can be easily identified in the wall paintings from Porphyreon are the pomegranates and pears, this thanks to the distinctive shapes of their fruit. On mosaic floors they are often represented alongside two other kinds of trees, one bearing round red fruit (probably apples or medlars) and the other with heart-shaped fruit (either peaches, apricots, or quinces; Öğüş-Uzun 2010: 399–400). In the Worcester Hunt mosaic from Antioch (late 5th–early 6th century; Öğüş-Uzun 2010), the four species probably allude to the pleasant countryside environment in which such hunts took place. The same set of fruit trees was used to depict the flora of Paradise, such as in the motif of *philia* (Öğüş-Uzun 2010: 407–409; Talgam 2014: 219–227) [*Table 5-1:158, 159*; *Fig. 5-51*].



Fig. 5-51. The motif of *philia*, symbolic representation of Paradise; floor mosaic; Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat; 557. Clockwise from upper right: pomegranate tree, pear tree, apple or medlar tree, and a tree with heart-shaped fruit



Fig. 5-52. Pomegranate tree; wall painting; Tomb with a Biblical Scene in Lohamey haGettaot; 4th/5th century



Fig. 5-53. Date palm and three fruit trees; floor mosaic; lower church at Khan Khaldé, mid-5th century

The pomegranate is certainly the most common tree species depicted on mosaic pavements. Its popularity may result from its various symbolic meanings, such as fertility or paradise, and/or the multitude of the faithful united and protected by the Church (Michaeli 2009: 135–136). Interestingly, only one example of this tree survives in Late Antique wall painting: a large pomegranate tree with fruit in the southern arcosolium of the Tomb with a Biblical Scene at Lohamey haGettaot (Michaeli 2009: 132, Figs 190–191) [*Fig. 5-52*]. The dense green foliage surrounding the pomegranates on wall paintings from Porphyreon suggests that they, too, were depicted on trees. The setting of the presumed pears on *Cat. 160* cannot be determined.

One fragment of a painting represents a palm tree (*Cat. 161*). The trunk is yellow and green, and is outlined on both sides with a series of connected brown crescents. The branches are represented as a green "plume" rendered with broad brushstrokes rather than individual elements. Four cursorily painted brown branches spring from the base of the plume; they could allude to the date-bearing branches of the tree. While the motif of the palm branch served as an emblem of victory throughout the Graeco-Roman world and was adopted as such by the Christians who extended its meaning to the martyrdom of saints and the triumph of Christianity, palm trees evoke associations with heavenly landscapes. This can be seen on a number of Late Antique wall decorations, for example, in the aforementioned Tomb with a Biblical Scene, where a representation of two tall palm trees is featured on its east wall (Michaeli 2009: 131, Figs 164–167) [*Table 5-1:160, 161*]. Palm trees also appear on Syro-Palestinian floor mosaics, although less frequently than the four species of trees described above [*Table 5-1:162–164*] [*Fig. 5-53*]. The one fragment from Porphyreon which features a palm tree is too incomplete for its broader compositional context to be determined.

5.6.3 Vegetal scrolls(?)

Three fragments represent a curious type of plant with winding, relatively thick stems and thin tendrils (*Cat. 162–164*). *Cat. 162* and *163* are almost monochrome, with only faint traces of green paint. *Cat. 164* shows a slightly more diversified color palette, featuring ocher for the stems, green for the foliage, and pink and red for the bell-shaped flower or fruit. The three fragments might have belonged to a representation of vegetal scrolls, perhaps vines.

5.6.4 Floral grid

The intrados surface of an arch, the face of which featured a depiction of inhabited scrolls, was decorated with the motif of a floral grid (*Cat. 171b*, *173b*, *174b*, *175b*, *176b*; see below, *§ 5.7*). The grid is the least naturalistic and the most schematized rendering of flora from Porphyreon. The fragments retain traces of flowers (approximately 10 cm in diameter) with round pinkish-orange centers surrounded by eight red petals. Two fragments show traces of what could have been a flower with a small round center, four large heart-shaped petals, and four pointy green shoots growing from between the petals. The flowers were arranged in a regular pattern and connected by a diagonal grid of leafy garlands. The foliage of the garlands was painted with short strokes of green and ocher paint. The rhomboidal compartments created by the grid contained depictions of flowers; a reconstruction of such a grid is shown here [*Figs 5-54*, *5-55*]. Fragments of wall paintings featuring similarly schematized flowers were recovered from the *domus ecclesiae* at Capernaum (the excavators reconstructed them arranged in a horizontal band above a painted representation of a curtain; Testa 1972: Pl. 2A) and from the Monastery of Khirbet el-Quneitira (probably 5th–6th century; Ben-Arieh 1999: 133, Col. Pl. IV.2).

Different variations of the motif of the floral grid, parallels for the Porphyreon wall paintings, are often featured on floor mosaics from the Syro-Palestinian churches [*Table 5-1:165–169*]. Red flowers and flower buds arranged in regular patterns and networks, much reminiscent of mosaic decorations, were also a popular motif on Late Antique textiles (e.g., Hodak 2010: 216–219, Pl. 26).



Fig. 5-54. Intrados surfaces of the five voussoirs with remains of a floral grid (left column); tracing of the pattern (right column)



Fig. 5-55. Hypothetical reconstruction of a flower grid

5.6.5 Red vegetal motifs

Four fragments of wall paintings seem to feature simple floral motifs executed with red paint (*Cat. 165–168*). They could have belonged to red linear genre(?) scenes (see below, *§ 5.8*) or depictions of simple red crosses (see above, *§ 5.2.1*).

5.7 Inhabited scrolls

Catalog numbers
169, *170*, *171a*, *172*, *173a*, *174a*, *175a*, *176a*, *177*, *178*

There are 12 fragments bearing an inhabited scrolls motif; they belong, however, to five different representations.

Two fragments (*Cat. 169*) were recorded on Saidah's slides and one of these (*Cat. 169a*) was rediscovered in 1987, quite possibly in the residential district area. Its condition has deteriorated significantly, to the point that it is now hardly recognizable as one of the fragments photographed in 1975. Its surface is severely abraded, and most of the green paint has flaked off. The two fragments depict viridian green scrolls, executed with broad brushstrokes, against a bright yellow background. The stems are slender, and the shape of the leaves is characteristic of a vine. A dark red band with white and light gray dabs borders the bottom edge of the scrolls. It is possible that the dabs attempt to imitate pearls, as in depictions of jeweled crosses. Alternatively, they may be a very schematic rendering of the "bead-and-reel" ornament. A light gray shape with white contours in the middle of the scroll on *Cat. 169a* could be a flower. All that remains from the contents of the scroll on *Cat. 169b* are the two red feet of a bird. The execution of the painting seems rather careless. The red band is not exactly straight, and the yellow background featuring very broad brushstrokes does not extend to this outline. The leaves are flat, without any shading or details; the lines appear to have been drawn freehand.

Two other fragments of inhabited scrolls, pertaining to one depiction, come from the 1987 assemblage (*Cat. 170*). They feature acanthus scrolls with succulent, wide leaves, dark red fruits, and a cluster of grapes set among the foliage. The two fragments must have been positioned side by side. The hind legs of a running animal, shown extended back, appear on one fragment, while

its muzzle is preserved on the other. The creature has a slender body, short coat, and pointed muzzle, a set of features characteristic of depictions of hounds (Toynbee 2013: 102–106, Figs 44, 46–47) [see below, *Fig. 5-62*]. The scroll to the right of the dog is occupied by a bird with a head crest, possibly a rooster, pecking on a bunch of grapes growing from the scroll. The background here is also light-yellow. A red band running above the scrolls separates them from the unpainted white plaster. The leaves are rendered with very thickly applied paint in several tones of green. The berries, grapes, and both animals are executed with a few tones of red and pinkish-brown paint, this, too, applied rather thickly. This representation appears to be of higher artistic quality than the two fragments discussed above.

Six other fragments of inhabited acanthus scrolls: *Cat. 171a*, *172*, *173a*, *174a*, *175a*, *176a*, decorated the face of an arch (for the arrangement on the arch, see below, *§ 6.2.1*). The best-preserved fragment (*Cat. 171a*) contains a graceful representation of a small partridge pecking on grapes. It is skillfully rendered, even if somewhat schematic. Other fragments present two pear-like dark pink fruits (*Cat. 172*), possibly two pomegranates (*Cat. 173a*), two heart-shaped red fruits (*Cat. 174a*), and a round red fruit (*Cat. 175a*). The fruits are set on stems growing from the scrolls. The same set of four fruit, including the unidentified heart-shaped species, frequently occurs in depictions of fruit trees on floor mosaics (Öğüş-Uzun 2010: 399–400). *Cat. 176a* is too poorly preserved for the contents of the scroll to be specified. Since many of the voussoirs are missing, the sequence of the fragments cannot be determined with certainty. However, the way in which particular acanthus stems and leaves connect suggests that *Cat. 171a*, *172*, *174a*, and *175a* could have been located next to one another [see below, *Fig. 6-2*].

The six fragments from the arch were also set against a light-yellow background. A bit of red paint may be seen at the very edge of the plaster at the bottom of *Cat. 175a*, indicating that a red band had framed the scrolls. The leaves are wide, undulating, and opulent, painted with several hues of green. Red acanthus fruits are set among them. The skillful rendering of the partridge testifies to a certain artistic refinement of this set of depictions, even though the fruits are painted more schematically. The scrolls from the arch are painted similarly to *Cat. 170*, yet it is not certain that they belonged together. If they did, the fragments with a dog and a rooster were not located on the arch, but they could have constituted a horizontal frieze joining the arch at its imposts.

Cat. 177 also represents a scroll, but it must have belonged to another representation of this motif since, unlike the other fragments, it is depicted against a white background. A fragment of a dark red scroll and small ocher tendrils are visible at the bottom of the preserved plaster. The scroll contained a representation of a bird, most likely a parakeet. The bird is light green with an ocher flank and a red foot. It seems to have a red ribbon tied around its neck, a feature very frequent in depictions of parakeets (e.g., parakeets on a late-6th-century mosaic in the Church of the Lions at Umm er-Rasas/Kastron Mefa'a; Piccirillo 1997: 236–237, Figs 342–343).[14] A diagonal cut at the bottom edge of this stone indicates that it must have been cut out from a voussoir (see above, *§ 4.1*) and thus decorated an arch.

[14] Arnott (2007: 294) argues that the ribbons around the necks of parakeets constitute a misinterpretation of models depicting *Psittacula krameri*, the ring-necked parakeet.

Cat. 178 seems to represent part of a scroll, tendrils and possibly a fruit or a flower, executed in a few shades of red against a white background. The stone has the shape of a voussoir, with the painting located on its intrados surface.

The motif of inhabited scrolls is one the hallmarks of Graeco-Roman imaginary. It was especially popular in the Eastern provinces, where it evolved into a number of iconographic and compositional variations (Toynbee and Ward Perkins 1950; Ovadiah and Turnheim 1994). The two principal media in which it appeared were architectural sculpture and floor mosaics, although it was also used in the minor arts [*Table 5-1:170–172*].

The scrolls are typically vine or acanthus, occasionally ivy. A statistical survey of floor mosaics featuring the inhabited scrolls motif has shown that prior to the 4th century CE there was no particular preference; afterward vines began to predominate (Dauphin 1987: 185–186). This may be explained by the Scripture-related associations. The numerous references to the vine and vine harvesting in the Old and New Testaments (e.g., the people of Israel as a vine in Psalm 79:8–16; Isaiah 5:1–7; the apostles as vine branches in John 15:1–8; see Maguire 1987b: 9–10, 32) made them especially suitable for sacred interiors. Moreover, it has been observed that the acanthus is more likely to appear in frame scrolls, while vines tend to fill rectangular fields.

The repertory of scroll content is nearly unlimited: representations of humans engaged in various activities, animals, fruit, flowers, buildings, or inanimate objects. Sometimes the depictions inside subsequent scrolls form a scene, like that of a hunt, while at other times, the images are unrelated to one another.

There are two primary compositional arrangements. The motif can either run inside a horizontal or vertical band, or it can develop over a broader field, usually rectangular. Furthermore, the scrolls, just like the real plants, may branch out in any direction and thus, be fitted into any space. The band arrangement is thought to have evolved from the Hellenistic motif of garlands decorated with theatrical masks, ribbons, and fruit. The carpet arrangement might have been inspired by the canopy of a real vine tree (Dauphin 1987: 183–184). In architectural sculpture, the band composition of inhabited scrolls predominated; they could be represented horizontally on friezes or vertically on door jambs, pilasters, and columns (e.g., Toynbee and Ward Perkins 1950: 32–33). Floor mosaics allowed for more freedom in their display. Inhabited scrolls filled large carpets or surrounded them as frames. Sometimes, they appeared both on the principal carpet and on a frame around it (Dauphin 1987; Hachlili 2009: 111–147; *Table 5-1:173–176*). As for wall paintings, there are a few examples from Syro-Palestine featuring the motif of inhabited scrolls. Similarly to depictions on floor mosaics, painted scrolls may either unwind over a broad surface or run in a band. Examples of the first type of composition comprise a number of ceiling paintings from tombs [*Table 5-1:79, 177–181*] [see above, *Fig. 5-42*]. As noted above, a real vine canopy was probably an inspiration for decorating ceilings with depictions of vines, while associations with paradise and the Dionysiac Mysteries made them especially suitable as sepulchral decoration.

Most of the inhabited scrolls in the carpet arrangement show a considerable level of artistic refinement in the rendering of the scrolls and the creatures dwelling in them. The subject is treated with detail and reveals careful observation of nature: the branches are spread out freely and at random rather than organized in a regular pattern of circles or sinusoidal shapes. Meanwhile, inhabited scrolls in a band arrangement tend to be more formalized and geometricized because of the narrow compositional confines [*Table 5-1:182–185*].

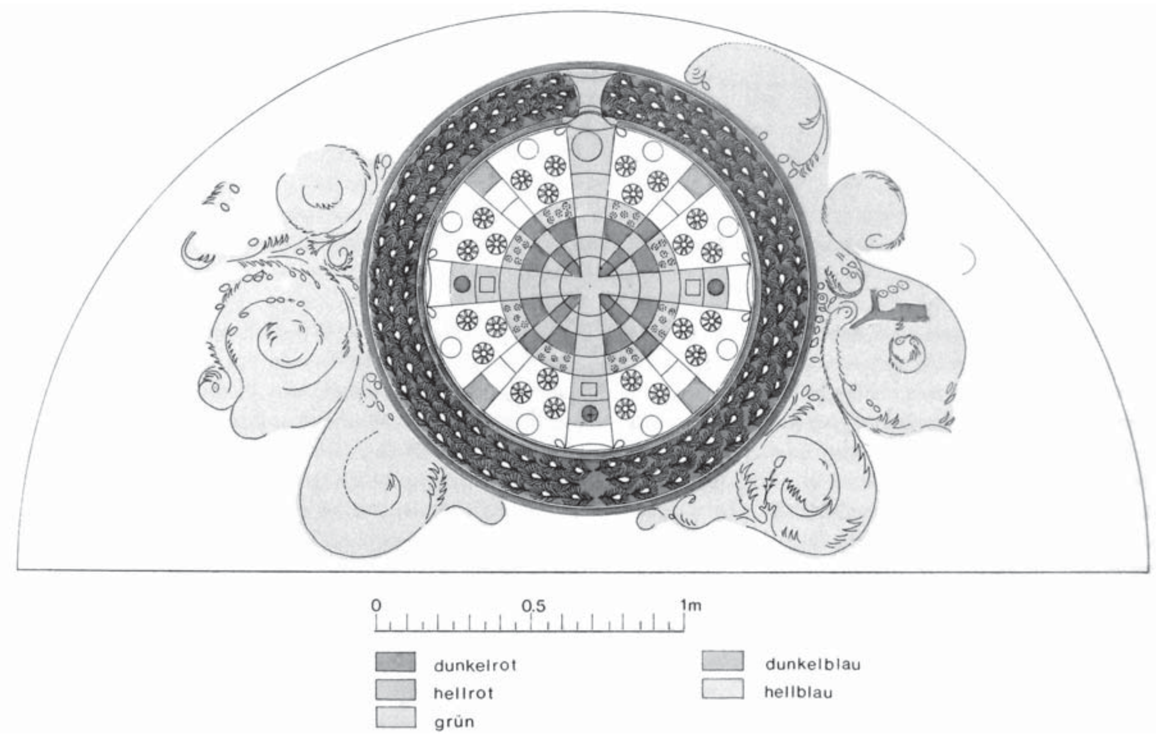


Fig. 5-56. Scrolls surrounding a medallion with a cross; wall painting in the apse of the "two-story chapel" adjacent to Basilica A at Resafa; 6th century

In the sphere of non-sepulchral painted wall decorations, the sole extant example of the scrolls motif from Syro-Palestine comes from Basilica A at Resafa. The scrolls surrounded a large medallion with a cross located in the apse of a "two-story chapel" abutting the southeastern corner of the main church (Ulbert 1986: 87, Fig. 52, Pl. 33.1) [*Fig. 5-56*]. Because of the condition of the painting it is impossible to determine whether any living creatures dwelled inside the scrolls. Two other painted examples of scrolls, but containing depictions of animals, come from Karm al-Ahbariya and Bawit in Egypt (Clédat 1916: 7–8; Müller-Wiener 1967: 223–224; Witte-Orr 2010: 151–156, Pl. 28ab) [*Figs 5-57*, *5-58*].

The fact that the scroll motif appears in some of the most important Umayyad monuments, such as the wall mosaics of the Dome of the Rock (691/692; Rosen-Ayalon 1989: 42, 54, Pls I–XVI) and the carved frieze in the Great Mosque of Damascus (706–714/715; Flood 2001: 57–68, Fig. 33), demonstrates that it continued to be used as a pattern and must have been rather common in wall decorations in Late Antiquity.

The inhabited scrolls from Porphyreon were arranged in a band composition: *Cat. 169* and *170* constituted a horizontal band, whereas *Cat. 171a*, *172*, *173a*, *174a*, *175a*, *176a*, and *177* decorated the face of an arch. *Cat. 178*, if correctly interpreted as a scroll, decorated the intrados surface of an arch. Employment of the scroll motif on the face of an arch is paralleled by scrolls with depictions of grapes and flowers on the arch above the entrance to the painted chamber in the Tomb of Three Brothers in Palmyra (2nd century CE; Eristov, Vibert-Guigue, and Sarkis 2006–2007: 150; Buisson et al. 2015). In terms of their pictorial style and general appearance,



Fig. 5-57. Fragment of a wall painting with an inhabited scroll (watercolor copy); church at Karm al-Ahbariya; 6th century



Fig. 5-58. Fragment of a wall painting with an inhabited scroll, containing depictions of a feline (left) and a spotted running animal, possibly a cheetah; Chapel XXX at Bawit; 6th/7th century

the depiction consisting of *Cat. 171a*, *172*, *173a*, *174a*, *175a*, and *176a* very much resembles inhabited scrolls framing one of the mosaics from the Villa at Jenah (Chéhab 1957: 64; 1959: Pl. XXX) [*Fig. 5-59*].

The scrolls from the Villa at Jenah and the vast majority of acanthus scrolls framing mosaics in the churches of Syro-Palestine are crowded with various species of animals or occupied by hunting and chase scenes. Curiously, representations of fruit are less common, save for grapes in vine scrolls [*Table 5-1:186–188*].



Fig. 5-59. Inhabited acanthus scrolls; floor mosaic; Villa at Jenah; late 5th century; currently in the presidential palace at Baabda. The scrolls contain depictions of dashing animals, hunters, and birds

5.8 Monochrome genre(?) scenes

Catalog numbers 179–186

Seven fragments documented on Saidah's slides and one fragment discovered by the PCMA-DGA mission show cursory red depictions of humans and animals, possibly belonging to genre(?) scenes. They share the following stylistic features: a monochrome palette, fluent, quick, yet rather careless brushstrokes, and a schematic composition, depicting only the basic details of the forms.

A frontally rendered bust of a man is shown on *Cat. 179*. He has thick short hair and a serene expression on his face. The lines on his chest could be part of his garment. The meaning of the brushstrokes above and to the left of his proper right shoulder and a curved line to the right of his face is unclear. On *Cat. 180* there is the lower body of a human figure, most likely male. He appears to be sitting (on a rock?) with his proper right leg bent and crossed over the left, which is stretched out in front of him. He seems to be naked, adding to the casual character of this representation. There are some plants visible in the lower and right part of the plastered ashlar suggesting that the scene is set in a landscape. The outlines of his proper left leg are not interrupted in the place where the right leg crosses it. The right calf is disproportionally thin in comparison to the other leg, while the foot is big and paddle-like. One of the *scuta* on the mosaic in the Chapel of St Theodore in the cathedral complex of Madaba features a flute player sitting in exactly the same pose on an upturned basket (Piccirillo 1997: 117, Fig. 96) [*Fig. 5-60*]. Also, a shepherd depicted inside a scroll on a mosaic in the Church of the Deacon Thomas in the 'Uyun Musa Valley leans on a staff, one leg crossing the other (first half of the 6th century; Piccirillo 1997: 187, Fig. 253). Generally, the posture featuring crossed legs points to a casual mood of repose and tranquility typical of pastoral scenes (Hachlili 2009: 153–154, 170).

A striding animal is depicted on *Cat. 181*. The two details which could help in its identification—paws (or hoofs) and the head—are missing. Its shoulder and the front part of the body is visibly bigger and stronger than the haunch. It appears to be a corpulent, muscular beast. A plant is depicted on the right side. The animal is somewhat reminiscent of representations of oxen from floor mosaics, as they often have humped backs [*Fig. 5-61*]. *Cat. 182* and *Cat. 183* may belong to one representation, possibly that of a dog. *Cat. 182* shows a head with a long muzzle, long ears, and an open mouth displaying a set of teeth. Something (a collar?) seems to be tied around the animal's neck. It has its front paws stretched in front of it, indicating that it was captured in a running motion. *Cat. 183* depicts the rear part of a slender body, hind leg(s), and a long tail of an animal rushing among plants. It has a series of spots along its spine; these spots also appear on top of the neck on *Cat. 182*. The fluent brushstrokes are notable, delineating the animal in a strongly stylized manner. These two fragments find a possible parallel in a motif of slender hounds chasing gazelles and hares, frequent on floor mosaics, especially inside inhabited scrolls [*Table 5-1:189, 190*; *Fig. 5-62*].

Fragmentary depictions of animals are featured also on *Cat. 184* and *Cat. 185*. The former represents a running creature with a long neck and the front legs stretched out to the front. It seems to be turning its head around, as if looking in fear at something threatening it from behind. It does not resemble any real species. *Cat. 185* shows two hind legs with long crooked claws stretched back, as if running. The animal has a long, relatively thick tail. Schematically rendered

plants are visible below the creature. Also, one fragment from recent excavations shows very faint remains of what may be the two hind legs of a running beast (*Cat. 186*).

The fragments discussed in this section seem to illustrate Saidah's words about paintings featuring gamboling "feline" and "equid" animals, and the genre scenes with working peasants which he discovered in the residential district (Saidah 1977). Indeed, the animals appear to be chasing



Fig. 5-60. Flute player; floor mosaic (watercolor copy); Chapel of St Theodore in the Cathedral complex of Madaba; 564

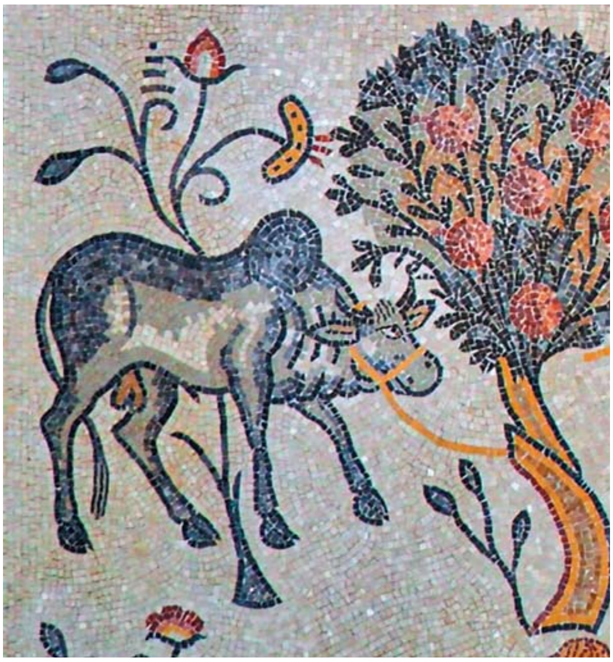


Fig. 5-61. Ox with humped back; floor mosaic; Old Diakonikon at Mount Nebo; 530

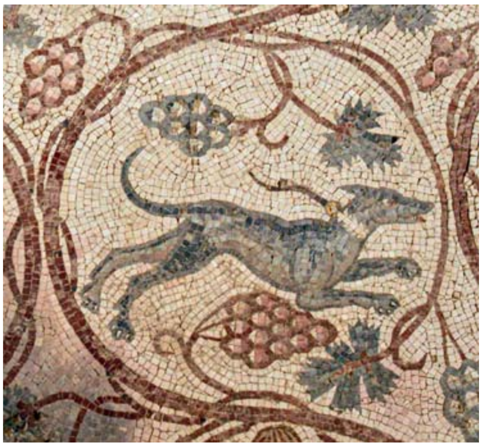


Fig. 5-62. Slender dashing hound inside inhabited scrolls; floor mosaic; Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat; 557



Fig. 5-63. Monochrome, cursory depiction of Daniel between two lions; wall painting; Tomb with a Biblical Scene in Lohamey haGettaot; 4th/5th century

each other, or "gamboling". The representations of men, even though highly fragmentary, have the air of pastoral scenes often seen populating the inhabited scrolls on floor mosaics.

Similar in style, although somewhat more skillful, is the nearly monochrome wall painting depicting Daniel between two lions in the Tomb with a Biblical Scene at Lohamey haGettaot (Michaeli 2009: 131–147, Figs 195–197) [*Fig. 5-63*]. As noted before, red pigment was one of the most common and cheap pigments in antiquity. This fact, alongside the sketchy style of the monochrome paintings from Porphyreon, suggests that they might have been executed by artists with lower skills and wage requirements or for humbler commissioners.

5.9 INSCRIPTIONS (WITH ADAM ŁAJTAR)

Catalog numbers
187–212; see also *88* for an inscription accompanying a depiction of a person (*§ 5.4.2*)

Fragments of painted inscriptions were found in considerable numbers both in the residential district and in the basilica. Most of them are preserved on ashlars from the collapsed walls of the buildings, and thus their original context cannot be determined. A few longer texts were discovered and documented in the residential district in 1975. Five of them were published several years after the excavations by Jean-Paul Rey-Coquais (1982: 399–402) (*Cat. 187–190*, *193*). None has survived to this day except for a fragment of *Cat. 188*.

All of the inscriptions were painted in red on white plaster. The extant fragments show either one or two lines of text; three lines are preserved only in one case (*Cat. 200*). Many fragments retain horizontal guiding lines to which the letters were aligned and which were executed with the "snapped cord" technique (see above, *§ 3.7*). The height and the style of the characters vary, which in some cases allows particular fragments to be attributed to a single inscription. Generally, the inscriptions appear to be well-planned out on the walls and executed with diligence. Only in inscription *Cat. 188* the painter seems to have omitted the letter *iota* in the word νικᾷ and had to insert it above, between the letters, after the word had been written. Inscription *Cat. 204a* is a palimpsest.

The inscriptions presented below are sorted starting from the longest ones, which allow their content to be reconstructed at least in part, and finishing with the most fragmentary texts, where the three characters preserved hardly support an interpretation.

1. *Cat. 187*, *188* (Rey-Coquais 1982: Nos 3–4)

The two inscriptions accompanied depictions of simple red crosses with the letters *alpha* and *omega*, which flanked the doorway leading from courtyard D11 into room D12 in the residential Complex 8. This room is where Saidah found various liturgical objects (Saidah 1977). The texts begin and end with small crosses and refer to the crosses painted above them.

A plastered stone with a fragment of the latter inscription was rediscovered by the PCMA-DGA mission during the most recent excavations. The extant plaster preserves just the upper tips of the characters and the letter *omega* from below the cross member. Since the *omega* measures 6.8 cm, the slightly smaller characters of the inscription were probably about 5–6 cm tall.

The inscription on the left side of the passage reads:

[†] Ἰ(ησοῦ)ς Χ(ριστὸ)ς βασιλεύει † Jesus Christ reigns

The inscription on the right side of the passage reads:

† ἐν τούτο̣ ν'ι'κᾶ † In this you shall conquer

read τούτῳ

The formula left of the doorway (*Cat. 187*) expresses the concept of the kingship of Christ, which was introduced and became widespread in the period following the official acknowledgment of Christianity.[15] The second text (*Cat. 188*) refers to the vision of Constantine who, according to Eusebius, saw the symbol of the cross in the skies with the words "Conquer by this" (*Vita Constantini*, I, 28),[16] but in a broader sense also to the concept of Christ the Victor, who defeated death. The medieval liturgical chant *Laudes Regiae* originated from the conjunction of the two concepts and formulas.[17]

The double formula Χριστὸς νικᾶ, Χριστὸς βασιλεύει appears on several Late Antique monuments. It was painted on the walls of a burial cave at the Alexandrian necropolis of Gabbari (5th/6th century; Heinen 1982; *SEG* XXXII 1573), engraved on the walls of a burial cave at Luzit (Di Segni 1990: 318, No. 7; *SEG* XL 1491), carved on a limestone slab found at Nitzana/Nessana (Kirk and Welles 1962: 177–178, No. 106), and featured on a lintel from Sameh (*SEG* XXXII 1481).

The formula ἐν τούτῳ νικᾶ is further paralleled by a few inscriptions from Syria and Arabia. For example, at el-Bāra it appears on a lintel (6th century; *IGLSyr* 4: 1457); in Baalbek, a cross within a circle, with Χριστὸς above it and τούτῳ νικᾶ below, was painted on the wall of the so-called Temple of Venus (*IGLSyr* 6: 2835); and at Umm el-Jimal, it was carved on a block built into the tower (Littmann, Magie, and Stuart 1913: 146, No. 251; *IGLSyr* 21, 5,1: 110). A painting in a tomb at Schnaan/Šnân (Griesheimer 1999) featured a Christogram and the formula τὸ σημίων τούτο νικᾶ (*IGLSyr* 4: 1404). A graffito on a column in the Cave Chapel in Horvat Qasra reads † νικᾶ (*SEG* XL 1460; *CIIP* IV 2, 3799).

2. *Cat. 189* (Rey-Coquais 1982: No. 5)

This fragment retains a single line placed below a simple red cross. A red line can be seen below the inscription. The height of the letters is unknown.

[- - - ὁ θ(εὸ)]ς̣ ἡμ‹ῶ›ν δόξα σοί . [- - -]

[- - -] our God, glory to you [- - -]

Omission of the letter *omega* in the word ἡμῶν is a scribal error rather than an intended abbreviation.

[15] On the concept of kingship of Christ and βασιλεύς as his title see Beskow 1962, especially 39–45.

[16] Of the extensive scholarship on Constantine's vision one can cite one of the most recent studies: Nicholson 2000.

[17] For the chant see Kantorowicz 1946 and the discussion by Heinen (1982).

The text is obviously a doxology. The exact wording is difficult to ascertain due to damage to both the beginning and end of the inscription. The possibilities include: [Χ(ριστ)ὲ ὁ θ(εὸ)]ς ἡμ‹ῶ›ν, δόξα σοί.[- - -], "Christ our God, glory to you [- - -]", and [δόξα σοί, ὁ θ(εὸ)ς] ἡμ‹ῶ›ν, δόξα σοί.[- - -], "Glory to you, O God, glory to you [- - -]". The lacuna on the right-hand side might have contained an adverb referring to δόξα, e.g., εἰς τὸν αἰῶνα, "for ages". The doxology was probably borrowed from the liturgy of the Christian Church, although it is difficult to determine the source exactly.

Doxologies similar to the present one appear in a number of carved inscriptions from Syro-Palestine, for example, the necropolis of Tyre (marble slab closing a loculus; Rey-Coquais 1977: 32, No. 49), el-Bāra (on a lintel; *IGLSyr* 4: 1455), Sheykh ʿAli Kasoun (lintel; *IGLSyr* 4: 1944), and Umm el-Jimal (block built into a tower; Littmann, Magie, and Stuart 1913: 146–147, No. 252; *IGLSyr* 21, 5,1: 111). A burial chamber from the Gabbari necropolis in Alexandria featured the formula Χριστὲ ὁ θεὸς ἡμôν δόξα σοί, in conjunction with the formulas on *Cat. 187*, *188* (5th/6th century; Heinen 1982; *SEG* XXXII 1573; LIII 1948).

3. *Cat. 190* (Rey-Coquais 1982: No. 6)

The inscription is known from a black-and-white photograph published by Rey-Coquais. It shows one line of text placed below a fragmentarily preserved cross with decorative knobs on the terminals and the letter *alpha* beneath its horizontal member. The height of the letters is unknown.

[- - -] πιστῶν φυ[λακτήριον?]

[- - -] protection of the faithful.

There are no direct epigraphic parallels for this inscription. Two inscriptions from Tyre featured only the word πιστῶν, "of the faithful". In one case it was accompanied by two crosses (Chéhab 1968: 9, 73; Rey-Coquais 1977: 36, No. 75).

Providing the reading is correct, πιστῶν φυλακτήριον looks like an epithet of the Cross with literary overtones. The Cross is called πιστῶν φυλακτήριον in a hymn to the Cross sung on several occasions in the modern Greek Orthodox Church (*MR* I 153, 177, 195; *MV* I 87, 101, 111; the exact reading of the verses in question is: χαίροις τὸ τῶν πιστῶν φυλακτήριον θείον, ἀπροσμάχητον τείχος, σταυρὸς ὁ τοῦ κυρίου, δι' οὗ ἀπὸ γῆς ἤρθημεν). Considering the conservative character of Greek hymnography, it is possible that a form of this hymn was known already in Late Antiquity. If πιστῶν φυλακτήριον is the epithet of the Cross here, one can supplement the text as follows: [σταυρὸς] πιστῶν φυ[λακτήριον], "the Cross is the protection of the faithful." Alternatively, one can assume that the word σταυρὸς was indicated graphically instead of being spelled out (see the remnants of a cross above the inscription). Stylistically, the phrase σταυρὸς πιστῶν φυλακτήριον resembles entries in hymns for the Cross contained in the homilies *In venerabilem crucem sermo* (*CPG* 4525) and *In adorationem venerandae crucis sermo* (*CPG* 4672), attributed to St John Chrysostom (for these texts, see, e.g., Suciu 2017: 44–45). Among the epithets of the cross appearing in the latter homily one finds πιστῶν ἀσφάλεια, "the safety of the faithful", which reflects a concept somewhat similar to πιστῶν φυλακτήριον. Inscriptions were occasionally modelled on

hymns to the Cross contained in Pseudo-Chrysostomian homilies on the Cross. Examples of such inscriptions are known from Sidon (Renan 1864: 390), Seleucia in Pieria (*IGLSyr* 3: 1191 A 1), Šekkin in Northern Syria (*IGLSyr* 3: 746 B), Strobilos in Caria (*SEG* XXXVIII 1167), Baspuaar in Romania (*Bull. épigr.* 1990, 916 [D. Feissel]), and the monastery of Ghazali in Nubia (*I. Khartoum Greek* 45; Ochała 2023: No. 210).

4. *Cat. 191*

The fragment, documented in 1975, retains one line of an inscription. The characters are tall and slender, somewhat similar to *Cat. 192* below. Their height is unknown.

> [Ἐμμαν]ουήλ· μηθ' ἡμῶν [ὁ θεός]

> Emmanuel, God is with us

The expression originates from the Gospel of Matthew (1:23): ἰδοὺ ἡ παρθένος ἐν γαστρὶ ἕξει καὶ τέξεται υἱόν, καὶ καλέσουσιν τὸ ὄνομα αὐτοῦ Ἐμμανουήλ, ὅ ἐστιν μεθερμηνευόμενον μεθ' ἡμῶν ὁ θεός, "Behold, the virgin shall conceive and bear a son, and they shall call his name Emmanuel, which means, 'God with us'." The text is paralleled by several inscriptions carved on lintels from, for example, Mēgāra (*IGLSyr* 4: 1406), Kōkaba (*IGLSyr* 4: 1447), Rouweyda in the Apamene (*IGLSyr* 4: 1795), and somewhat farther away, the Episcopal Basilica at Stobi in Macedonia (approximately 500; Feissel 1983: 230, No. 274). This expression was also painted on the walls of a chapel arranged in a cistern in Salamis (Bardswell and Soteriou 1939; Felle 2006: No. 140). It was not uncommon on small objects, such as an amulet with Christ and the Virgin Mary found at Beth Shean/Scythopolis (Fitzgerald 1939: 11, Pls 3–4), and Byzantine lead icons of unknown provenance (*SEG* LV 1942 and LIX 1933).

5. *Cat. 192*

This inscription was recorded in 1975. The two lines of the text are placed below a simple red cross with decorative knobs and curls at the terminals. The second line ends with a red leaf. The characters are elegant and slender, their height is unknown.

> [κύριος φωτισμός μο]υ καὶ σωτήρ μου
> [τίνα φοβη]θ̣ή̣σ̣ο̣μαι;

> The Lord is my light and my salvation;
> whom shall I fear?

This inscription is a quotation of the first verse of Psalm 26 (27). In Syria, it is epigraphically attested twice on lintels: at el-Andarin/Androna (*IGLSyr* 4: 1679) and at Sara/Serāʿ (*IGLSyr* 4: 1669), and once on a fragment of stone reused in a wall of a building of unknown function in Ghour/Garion (west of Homs/Emesa; *IGLSyr* 5: 2158). It also appears on the wall of a burial cave in Jerusalem and on four oil lamps, possibly from Jerusalem as well (*CIIP* I.2: 890; Felle 2006: Nos 213, 223–226).

6. *Cat. 193* (Rey-Coquais 1982: No. 7)

This inscription consists of three parts surviving on three ashlars (a, b, c), documented in black-and-white photographs published by Rey-Coquais.

> † ὁ κατο[ικῶν] ἐν βοηθίᾳ τοῦ [ὑψίστου ἐ]ν σκέπ[η τοῦ θεοῦ]
> τοῦ οὐρα[νοῦ α]ὑλισθέσητε· ἠρῖ ṭ[ῷ κυρίῳ· ἀντι]λέμτορ [μου εἶ †]
>
> 1. read βοηθείᾳ
> 2. read αὐλισθήσεται | read ἐρεῖ | read ἀντιλήμπτωρ
>
> Whoever dwells in the shelter of the Most High will rest in the shadow of the Almighty.
> I will say of the Lord, "He is my refuge"

The inscription consisted of two lines, as evidenced by plain plaster below the second line. Even though all three fragments were ascribed to one text, it should be noted that there is a horizontal band framing the inscription at the top, clearly visible on two of the pieces illustrated by Rey-Coquais (1982: Figs 8 and 10), but missing from the third (1982: Fig. 9) (see *Cat. 193*). Furthermore, the letters on the lattermost fragment are much more crowded and slender than on the other two fragments. Therefore, it is possible that these fragments come in fact from two separate inscriptions featuring the same text (for example, originally from two different houses).

The fragments quote the first verse and the beginning of the second verse of Psalm 90 (91). Due to their apotropaic character, the verses from this Psalm, or usually just its incipit, were immensely popular on personal objects, especially amulets and jewelry, in tombs and on sarcophagi, and on lintels, the vast majority of which come from Syro-Palestine and Egypt (Feissel 1984: 229; Felle 2006: 421–422; Kraus 2005; 2009). Syro-Palestinian specimens may be found on lintels in Mektébé (*IGLSyr* 2: 341), Rouweīḥa (*IGLSyr* 2: 675), Tell Frēğ in the Apamene (*IGLSyr* 4: 1748), Rasm Abū Miyāl in the territory of el-Andarin/Androna (*SEG* LXIII 1624), Homs/Emesa (*IGLSyr* 5: 2234), and Meğeleyya, where it is featured on a sarcophagus found in the ruins, dated by an inscription to 463 (*IGLSyr* 4: 1488). It also appears in a burial cave in Jerusalem (*CIIP* I.2: 891; Felle 2006: No. 215). Examples of the minor arts include a bronze ring from Tell Minnis (*IGLSyr* 4: 1714), a bronze disk depicting a saint on a horse from Hama/Epiphania (*IGLSyr* 5: 2061), bracelets from Sidon (Felle 2006: No. 252), Aleppo/Beroea (Felle 2006: No. 294), and Gabala (*SEG* LX 1670), and a bronze medallion from Latakia/Laodicaea (Felle 2006: No. 298).

7. *Cat. 194*

This fragment was discovered in 1987. It retains one line of text, highly abraded and faded. The characters are 7.5–8 cm tall.

> [- - -]ν ἐν βοηθίᾳ [- - -]
>
> 1. read βοηθείᾳ
>
> [- - -] in the shelter [- - -]

Like the preceding inscription, this one could have also quoted the first verse of Psalm 90 (91). If so, the text can be supplemented as follows: [ὁ κατοικῶ]ν ἐν βοηθίᾳ [τοῦ ὑψίστου - - -], "Whoever dwells in the shelter of the Most High [- - -]".

8. *Cat. 195*

The fragment, documented in 1975, shows two lines of text. The lower line ends in a "hyphen" and a small cross. The characters appear tall and slender. Their height is unknown.

[- - -]οβηθεσο[- - -]
[- - -]ος - †

The word in the first line may be a misspelling of the word βοηθός, "the one who helps". More likely, however, it could be a misspelling of φοβηθήσομαι, the first-person singular of the future indicative of the verb φοβέω, "to fear", in the passive, which appears, for example, in Psalm 26 (27) featured in inscription *Cat. 192* above.

9. *Cat. 196*

The inscription is badly abraded. The characters are approximately 12 cm tall.

[- - - ο]ὐρανο[- - -]

This is obviously a form of the word οὐρανός, "heaven", "sky", although the missing ending makes it impossible to identify the form (οὐρανός, οὐρανοῦ, οὐρανόν, οὐρανοί, οὐρανοῖς, οὐρανούς).

10. *Cat. 197*

The fragment retains the upper parts of five characters made in dark red paint. They are thin and elegant, featuring small decorative serifs. There is a horizontal, pale ocher band running above the inscription. The height of the surviving fragments of letters is 5.2 cm, so it may be assumed that they were not taller than 8–9 cm. Note a double dot above *ypsilon*, obviously indicating the initial position of the letter in a word (a breathing?).

[- - -] τοῦ ὑψ[ίστου - - -]

[- - -] of the Most High [- - -]

ὕψιστος, "the highest", refers to God in common Judeo-Christian usage (Beskow 1962: 307–312).

Perhaps the inscription is a quotation from Psalm 90:1 (91:1), like *Cat. 193*.

11. *Cat. 198*

The fragment retains parts of a few letters arranged in two lines. Neither of the lines is preserved in its full height. The estimated height of the characters is 8–8.5 cm. The upper line may begin with a small cross.

[- - -] ̣ ̣ξω[- - -]
[- - -]π̣ιβ̣ου̣[- - -]

The word in the second line may derive from the verb ἐπιβουλεύω, "to plot", "to plan", "to contrive against."

12. *Cat. 199*

The fragment retains a line of inscription consisting of large, carefully rendered characters and bottom tips of letters from an upper line. The characters are 18 cm tall.

[- - -] . . . . [- - -]
[- - -]ν ἀμνόν [- - -]

[- - -] the Lamb [- - -]

The third sign of line 2 is assumed to be a ligature of *mu* and *nu*, hence the reading as given above. *nu* before ἀμνόν may be the last letter of the article: τὸ]ν ἀμνόν. ἀμνός, "Lamb", obviously refers to Jesus Christ.

13. *Cat. 88*

The fragment represents the upper half of the head and possibly the proper right hand of a frontally rendered individual, quite likely an orans. There is a *titulus* to the left of the head, which very likely continued on the other side of the figure. The letters are 5 cm tall.

πανε

This word could be the beginning of a name or an epithet of the depicted person. For example, πανεύφημος, "all praiseworthy", appears in three carved inscriptions from Khanasir/Anasartha, among others as an epithet of a certain Gregorios (late 6th–early 7th century; *IGLSyr* 2: 281, 288, 292). Nevertheless, the possible readings of these four letters are far too numerous to attempt an interpretation.

14. *Cat. 200*

The fragment reveals three lines. The height of the characters ranges from 5.7 cm to 7.3 cm. Two curls present at the upper edge of the plaster may belong to a depiction of a red cross.

† κ(ύριο)ς . [- - -]
ουφ[- - -]
μετ[- - -]

The uppermost line contains the *nomen sacrum* κύριος, "the Lord". The other lines are indecipherable. It appears that the first letters of the three lines are aligned to the same vertical border, which suggests that the fragment shows the beginnings of the lines.

15. *Cat. 201*

The fragment contains two lines of an inscription. The characters are 6 cm tall. The third letter of the upper line appears to have been corrected.

[- - -]υ . . ου . [- - -]
[- - - -]ου . [- - - - -]

The second and third letters of the upper line are round, which suggests the reading το]ῦ θ̣ε̣οῦ. Another possible reading is]υς σ̣ου, but the problem is the second letter, which seems to be a complete oval rather than a bowl.

16. *Cat. 202*

The fragment retains one line of an inscription executed in large, neat characters, measuring 14 cm. The plaster is very much deteriorated.

[- - -]πενπε . . . [- - -]

One is tempted to read: [- - - εἶ]πεν Πέτ̣ρ̣ο̣[ς - - -], "[- - -] Peter said [- - -]." This set of words, if interpreted correctly, appears in a number of passages from the New Testament (e.g., Mt 16:16; Lk 8:45, 9:33; Acts 3:6), and would introduce a quotation from St Peter. Nevertheless, there are no immediate and satisfying parallels for such an interpretation. The words of Peter cited in Mt 16:16 were inscribed on a marble slab from Cisamus in Crete, while a quotation from Peter from Acts 3:6 appears in a Latin inscription from a burial in Malta (Felle 2006: Nos 562 and 642, respectively), but neither of these texts actually use the introductory expression "Peter said".

17. *Cat. 203*

These two fragments of inscriptions represent a similar rendering of letters characterized by decorative loops on the diagonal of the *nu* and the cross-bar of the *alpha*, features which do not occur in any other text from Porphyreon. *Cat. 203b* retains one line of characters and the tops of the letters of the lower line. The characters are 9–9.3 cm tall.

[- - - -] . . ε̣νκ . [- - -] [- - -] . σκα . [- - -]
[- - - τ]ὸν κ(ύριο)ν [- - -]

The second line of *Cat. 203a* contains the *nomen sacrum* κύριος, "Lord", in the accusative. The rest of the inscription is indecipherable.

18. *Cat. 204*

The two fragments in question may belong to one text: the style and size of the characters are very similar, and the plaster is similarly damaged, presenting a dense network of narrow channels. The characters are relatively tall, measuring approximately 15–16 cm. Their vertical members appear "bloated".

Cat. 204a is highly abraded. Interestingly, the second and the third characters were corrected. There seems to be a horizontal abbreviation mark for the *nomen sacrum* above the palimpsest. Unfortunately, the condition of the paint does not permit unequivocal determination of the combination of letters that was first. One can read either [- - -] . υ(ἱὸ)ς κ[- - -] or [- - -] . θοκ[- - -]. Regardless, at a certain stage, the text referred to Jesus Christ understood as the second person of the Holy Trinity ("The Son").

Cat. 204b reads: [- - -] . ορον[- - -]. Interpretation is impossible due to the multitude of words containing this particular set of letters.

19. *Cat. 205*

The archival slide shows a single line of inscription executed in slender, neat characters with small serifs. The height of the letters is unknown.

[- - -]ωνεν ̣[- - -]

The text is too fragmentary to be interpreted.

20. *Cat. 206*

This small stone retains the remains of two characters with a horizontal abbreviation mark for the *nomen sacrum*. The letters are approximately 6 cm tall.

[- - -] κ̣(ύρι)ε ̣[- - -]

21. *Cat. 207*

The fragment shows the beginning of a line. The characters are 7 cm tall.

το̣[- - -]

22. *Cat. 208*

The fragment shows the end of an inscription with a decorative motif ending the line. The characters are 8 cm tall.

[- - -]ο̣ς

23. *Cat. 209*

The fragment retained one line of inscription and part of a second line below. The characters are 8.5 cm tall.

[- - -] ̣α ̣[- - -]
[- - -] ̣[- - -]

24. *Cat. 210*

The fragment probably shows the end of an inscription ending in a cross. The estimated height of the characters is at least 12 cm.

25. *Cat. 211*

The fragment retains parts of 3–4 characters, about 8–8.2 cm tall. The orientation of the text is unclear. It can be either [- - -]σο ̣[- - -] with the letter *sigma* connected to a character before it, or [- - -] ̣οπ[- - -] should the text be rotated by 180 degrees.

26. *Cat. 212*

The fragment retains one line of an inscription, with three characters and a small part of the fourth. The height of the letters is unknown.

[- - -]δον ̣[- - -]

5.9.1 Paleographic observations

Despite the differences in size, the inscriptions from Porphyreon share some stylistic and technical features. As noted before, they are all painted in red on white plaster. The hue differs from fragment to fragment, but this may be related to the thickness of the applied paint and the rate of deterioration of particular fragments. With the exception of *Cat. 187–189*, *196*, *200*, and *201*, all the inscription fragments display red lines below each line of text, intended to keep the letters aligned. In some cases, both lower and upper guiding lines are visible; their purpose was to ensure that the letters would be of equal height (e.g., *Cat. 192*). The six instances in which guiding lines were not used display characters of uneven height and somewhat sloppy shape. Nevertheless, the letters are in all cases very regularly spaced. The spaces are moderate, and none of the texts appear overly crowded. The texts are executed in capital letters, generally based on an oval module, although there are some more angular specimens as well.

The generally very uniform appearance of Greek lettering between the 4th and the 10th centuries, as demonstrated by Cyril Mango (1991: 242–246; see also Ševčenko 1992: 39–40), renders them useless for dating inscribed objects or monuments, especially because of the influence of different techniques of execution (carving, painting, composing with tesserae) on the shape of the characters. Nevertheless, a few nuances of form of the painted letters from Porphyreon can be pointed out. All occurrences of *upsilon* feature a small horizontal bar where the stem splits into two arms. The *omegas* are compressed and have the lateral bars straight and upright, so that they appear as a W. This characteristic can also be observed in all instances of the letter *omega* accompanying the simple and jeweled crosses. Such a compressed, straight *omega* is noted in several carved funerary inscriptions from the necropolis of Tyre (see Rey-Coquais 1977: Nos 81, 165, 202, 219) and on a silver chalice from the Kumluca treasure (Ševčenko 1992: 40). Leah Di Segni recorded this form of rendering of the *omega* on a number of stone monuments and mosaics from Palestine; it seems to appear in the 5th century and tends to be more frequently used in floor mosaics than on stone (Di Segni 1997: 891, Tables 1–15).

The character of the medium dictates employment of a compressed, straight *omega* (W) in the above-listed examples: the shape is easier to carve or to compose from stone tesserae than the curved ("bloated") form of the letter. Meanwhile, the painting medium allows letters to be rendered with ease regardless of their shape. Indeed, painted inscriptions from Late Antique Syro-Palestine feature the curved *omega*.[18] Considering that, it is curious why the painters from Porphyreon decided to use the straight, compressed form of the letter, which is more typical of the "hard" media. Such treatment of this character is attested in painted inscriptions from a burial cave of uncertain date at the necropolis of Tyre (5th or 6th century(?); Walser 2015: 233, 237–238, Fig. 3) and from two rock-cut tombs in the area of Gethsemane in Jerusalem (*CIIP* I.2: 907–908, 911).

Almost all instances of *omega* and *mu* have small roundels located above (for *omega*) or below (for *mu*) the meeting point of the two diagonal bars. The *omicrons* tend to be ogival ("almond-shaped"), meaning that the top is visibly pointy while the bottom is wider and rounded.

[18] Painted inscriptions were found in Umm er-Rasas/Kastron Mefa'a, Petra, Caesarea, and Rehovot-in-the-Negev (see below, *§ 6.2.6*).

A few stylistic groups of lettering can be discerned. One of them is characterized by elongated letters executed with thin lines (*Cat. 191*, *192*, *195*, *205*). In this group, the horizontal bars of *eta* and *upsilon* are set relatively high, at about two-thirds of the letters' height. However, the middle bar of *theta* and *epsilon* remains at about half the height. The characters have small serifs. The preserved part of *Cat. 197* exhibits similar features.

Another distinctive set comprises the two fragments of *Cat. 203* which clearly belong to one text. The letters are not as elongated as in the previous group, and their bars are painted with relatively thick lines. They are characterized by decorative loops on the diagonal of *nu* and the crossbar of *alpha*. Such occasional "fanciful" variations of letterforms are attested in Late Antique and early Byzantine Greek script (Mango 1991: 243).

The inscription on *Cat. 199* has large, slender, and neatly executed characters. *Cat. 196* and *Cat. 204* retain large letters which are composed of both thin lines and bloated vertical bars. The loop of the *rho* and the crossbar of the *alpha* appear disproportionately high. The characters on *Cat. 190* are very angular, which is especially visible in the *phi*, composed of a vertical stem and a rhombus.

5.10 Unidentified or illegible fragments

Numerous fragments of wall paintings are unfortunately either featureless, too fragmentary, or too abraded to identify the depicted motif. Some of the fragments can be tentatively ascribed to particular iconographic groups, although most of them do not permit much commentary. Below is a listing of these remains, roughly grouped by tentative iconographic attributions following the order in the catalog.

- red cross(?): *Cat. 223* – fragment of a red cross(?) or an inscription; *Cat. 237* – green roundel with red contours, cross terminal with a knobbed end(?); *Cat. 263* – insignificant remains of red paint resembling part of a cross
- jeweled cross in a medallion: *Cat. 218* – pinkish brown band with dark red and light pink elements; *Cat. 219*
- remains of a medallion(?): *Cat. 215* – most likely outer ring; *Cat. 245* – fragment of a yellow band; *Cat. 259*; *Cat. 260*
- fragment of a wreath(?): *Cat. 248* – blurry mass of pink color, possibly circular in shape
- geometric patterns: *Cat. 214* – parallel lines in yellow, light red, and dark red; yellow field with dark gray contour visible at the edge of the preserved plaster; *Cat. 216* – dark green band and a parallel red line; *Cat. 217* – red band; *Cat. 222* – two parallel color bands, one red, the other pinkish brown; *Cat. 225* – light red lines and a yellow shape; *Cat. 239* – thin red band; *Cat. 244* – two red lines and some red and yellow elements; *Cat. 257* – green and yellow stripes, slightly curved; *Cat. 258* – remains of a red band
- figural (human/animal?) representation: *Cat. 213* – different brown, khaki, and yellow color fields and brushstrokes; free-hand brushwork and mixing of particular colors; interpretation hampered by the poor condition of the painting; *Cat. 226* – red color field with brushwork resembling drapery; part of a khaki green field at the edge of the plaster
- bird(?): *Cat. 243* – unidentified shape executed with red lines

- animal(?): *Cat. 227* – large shape painted in brown, pink, red, yellow, and black; brushstrokes running in various directions; *Cat. 232* – light brown shape with an undulating outline; eye-like circle painted with red inside a brown color field; *Cat. 247* – ocher element resembling an animal's paw above a brown shape; remains of green foliage to the left
- foliage/vegetal(?): *Cat. 224* – several shades of pink with no details; a green leaf(?) next to it; *Cat. 235* – green shape; *Cat. 236* – yellow, pomegranate-shaped element, possibly a fruit; fragment of a green leaf at the edge of the plaster; *Cat. 238* – dark red band and light green leaves; *Cat. 246* – remains of a yellow band, similar to depictions of strips of ground; *Cat. 254* – green and ocher elements; *Cat. 265* – remains of a red flower-like element
- red linear genre(?) scenes: *Cat. 240* – set of red lines; *Cat. 241* – undulating red lines; *Cat. 242* – a few red lines
- inscription(?): *Cat. 261* – thin red lines
- unidentified patches of color: *Cat. 220* – orange shape with small red details; *Cat. 221* – patch of color with several tones of dark red; *Cat. 228* – edge of an orange shape with dark gray contours and thick dabs of white paint applied "wet-into-wet"; dark orange, round element with three strokes of white paint; *Cat. 229* – yellow shape with gray contours looking like the flared end of a golden cross; fragment of a red round shape next to it; light gray and yellow strokes; fragment of a round orange shape with gray contours and dabs of white paint, similar to *Cat. 228*; *Cat. 230* – yellow color field with some circles painted a dark orange and red, apparently distributed in rows; *Cat. 231* – light brown element and a "broken" line next to it; *Cat. 233* – light pink shape with dark red roundels; *Cat. 234* – fragment of a rounded, ocher-colored shape with somewhat darker contour; *Cat. 250* – fragment of a pinkish brown element; *Cat. 252* – light green and yellow paint applied with broad brushstrokes
- insignificant remains of paint: *Cat. 249*, *251*, *262*, *264* – red; *Cat. 253*, *255* – dark red; *Cat. 256* – red and yellow.

Some of the ashlars given inventory numbers in the past currently retain only plain plaster (*Cat. 266–279*, *281*). It is plausible that at the moment of discovery the surface of the preserved plaster was larger and that it featured some painted motifs, but the progressing deterioration led to the complete loss of the paint layer over time. Similarly, some of the blocks discovered in 1987, which do not retain any plaster at all (*Cat. 280*, *282–287*), must have had plaster upon discovery; otherwise, they would not have been deposited in the museum.

Table 5-1. Selected comparanda for iconographic motifs and compositional schemes

	Representation	Medium	Location	Dating	Reference
1.	Simple red crosses, some between palm branches	Wall painting	Tomb with Two Busts at Beit Guvrin	4th/5th c.	Michaeli 2009: 111–112, Figs 158–161
2.	Simple red crosses	Wall painting	Tomb near Gethsemane, Jerusalem	4th c.(?)	Lagrange 1892: 448–451
3.	Simple red crosses, including one in a wreath	Wall painting	Tomb with depictions of birds at Beit Guvrin	4th/5th c.	Moulton 1921–1922: Pls 2, 4
4.	Red cross with the letters *alpha* and *omega* inside a wreath	Wall painting	Tomb with Biblical Scene in Lohamey haGettaot	4th/5th c.	Michaeli 2009: 133, Figs 171, 208
5.	Red cross between two palm branches	Wall painting	Tomb at Thessaloniki	6th c.	Lazaridou 2012: 165–166, Fig. 137
6.	Simple, red "Latin" cross	Wall painting	A room of Insula M01, Ephesus	First half 5th c.	Zimmermann 2010: 631, Fig. 14
7.	Crosses adored by birds	Wall painting	*Taberna* of Terrace House 1, Ephesus	5th/6th c.	Zimmermann 2010: 629–630, Figs 12–13
8.	Cross with remains of hanging chains for suspending the letters *alpha* and *omega*	Metalwork: bronze	Church of Bishop Malachios at Muqawir, Jordan (Archaeological Museum at Madaba)	6th–7th c.	Piccirillo 1995: 301, Phot. 16
9.	Cross with the suspended letters *alpha* and *omega*	Metalwork: silver	George Oritz collection, Geneva	6th–7th c.	Cruikshank Dodd 1987: Fig. 8
10.	Jeweled crosses with pendilia, some flanked by birds	Wall painting	Kellia hermitages, Egypt	6th–7th c.	Rassart-Debergh 1988; Zibawi 2003: 94, Figs 105–110
11.	Jeweled cross with pendilia	Wall painting	Church at Karm al-Ahbariya, Egypt	6th c.	Witte Orr 2010: 165–166, Fig. 18
12.	Jeweled cross against star-studded background and inside a medallion	Wall mosaic	Sant' Apollinare in Classe, Ravenna	549	Rizzardi 2012: 150–155, Fig. 139; James 2017: 240–242, Fig. 94
13.	Two golden crosses with pendilia inside medallions	Wall painting	Oratory of the Forty Martyrs in the Forum Romanum, Rome	First half 8th c.	Bordi 2016a: 283, Figs 2, 7
14.	Jeweled cross flanked by two lions	Floor mosaic	Church at ʻOzem	5th c.	Di Segni 2012: 153, Fig. 1c
15.	Golden(?) cross in a *tabula ansata* and two equal-armed crosses inside interlaced medallions	Floor mosaic	Church of St Bacchus near Horvat Tinshemet	6th c.	Dahari 2012: 106, Figs 6–7
16.	Golden cross in a medallion with cable decoration adored by two pheasants and two doves	Floor mosaic	Church at Aluma	6th c.	Talgam 2014: 182, Fig. 270
17.	Equal-armed crosses, one in a medallion with cable decoration	Floor mosaic	Church at Shavei Zion	5th c.	Avi-Yonah 1967: 48–49, Pls XI, XXVIII–XXIX, XLb
18.	Equal-armed cross in a medallion with cable decoration	Floor mosaic	Basilica Q at Jiyeh/Porphyreon (now Beiteddine Museum)	6th c.	Hélou 2019: Fig. 93

	Representation	Medium	Location	Dating	Reference
19.	Equal-armed cross	Floor mosaic	Church at Deir ʻAin ʻAbata (Sanctuary of Lot)	Early 7th c.	Politis 2012: 176, Pl. 22
20.	Christograms and crosses in wreaths	Sarcophagi, carved stone	Rome, Ostia	4th, 5th c.	Deichmann 1967: Cat. Nos 49, 59, 61, 859
21.	Crosses in simple medallions	Sarcophagi, carved stone	Dalmatia	6th c.	Cambi 2002: 48–49, Pls 16.3, 17.4
22.	Equal-armed cross in a wreath and with ribbons ending in ivy leaves	Chancel screen, carved stone	Church at Massu'ot Yitzhaq in the Negev	6th c.	Habas 2009: 102, Fig. 10
23.	Equal-armed cross in a wreath and with ribbons ending in ivy leaves	Chancel screen, carved stone	Church at Petra	6th c.	Kanellopoulos and Schick 2001: Figs 4–5, 10
24.	Two crosses in wreaths	Chancel screen, carved stone	North-West Church at Hippos-Sussita	6th–7th c.	Młynarczyk and Burdajewicz 2013: 209, Fig. 279ab
25.	Thick wreath with various fruits set in dense foliage	Wall mosaic	Dome mosaic in the Rotunda at Thessaloniki	Late 4th c.	Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 114, Fig. 72
26.	Eight garlands emerging from *kantharoi* and supporting a central medallion with a Christogram	Wall painting	Tombs 1904 and 1909 in Chersonesos, Crimea	Late 3rd–early 5th c.	Anatol'evna Zavadskaya 2013: 49–51, Figs 13–14
27.	Eight garlands emerging from *kantharoi* and supporting a central medallion with a Christogram	Wall mosaic	Baptistery of San Giovanni in Fonte in the Basilica of St Restituta in Naples	Second half 4th c.	James 2017: 174, Fig. 66; Croci 2019: Fig. 2 on p. 66
28.	Imago clipeata of St Victor in a wreath	Wall mosaic	St Vittore Chapel in Milan	5th c.	Mackie 1995: 92
29.	Cross inside a highly stylized wreath made of small red flowers	Floor mosaic	Khirbet al-Beiyudat	Late 5th–late 6th c.	Talgam 2014: 182
30.	Cable pattern on two medallions surrounding inscriptions	Floor mosaic	Church at Zahrani	Late 4th c.	Chéhab 1957: 99; 1959: Pls LVI.1, LVII.1; Donceel-Voûte 1988: 435–436
31.	Cable pattern on interlaced *scuta*	Floor mosaic	Chapel of the Martyr Theodore at Madaba	562	Piccirillo 1997: 117, Fig. 97; Michel 2001: 307, Fig. 291
32.	Cable pattern on interlaced *scuta*	Floor mosaic	Crypt of St Elianus at Madaba	595/596	Piccirillo 1997: 120–125, Figs 125, 131, 133; Michel 2001: 322–323
33.	Cable medallion in colors of the rainbow around the central image in the dome	Wall mosaic	Dome mosaic in the Rotunda at Thessaloniki	Late 4th c.	Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 114, Fig. 72
34.	Cable pattern on the frame around an image of Dioscorides and Heuresis	Manuscript, miniature painting	The Vienna Dioscorides (Codex Vindobonensis med. gr. 1, fol. 4v), Austrian National Library	Early 6th c.	Weitzmann 1979: 206

	Representation	Medium	Location	Dating	Reference
35.	Cable pattern on the arch above the figures of the Virgin and Child	Manuscript, miniature painting	Rabbula Gospels (cod. Plut. I, 56, fol. 1v), Biblioteca Medicea Laurenziana, Florence	586	Bernabò 2008b: 84, Pl. II
36.	Cable pattern in headpiece above the letter of Eusebius	Manuscript, miniature painting	Abba Garima III (AG I, fol. 10r), the Monastery of Ǝnda Abba Garima, Ethiopia	350–650	McKenzie and Watson 2016: 105–112, Fig. 147
37.	Cable pattern in headpiece above the letter of Eusebius	Manuscript, miniature painting	Abba Garima I (AG I, fol. 25v), Monastery of Ǝnda Abba Garima, Ethiopia	530–660	McKenzie and Watson 2016: 105–112, Fig. 144
38.	Lotus-band framing a hunting scene	Floor mosaic	Diakonikon at Jabaliyah, Gaza	Mid-5th c.	Humbert et al. 2000: 124
39.	Lotus-band framing a Nilotic scene	Floor mosaic	Church of the Multiplication of Loaves and Fishes at Tabgha/Heptapegon	Second half 5th c.	Michaeli 2013: 127–129, Fig. 10a
40.	Lotus-band framing aisle mosaics	Floor mosaic	Church at Kursi	Late 5th/ early 6th c.	Tzaferis 1983: 15, 24, Pls X.2, XI.4
41.	Lotus-band framing nave mosaic	Floor mosaic	Synagogue at Horvat Ma'on	First half 6th c.	Dunbabin 2012: 193, Fig. 205
42.	Lotus-band on interlaced *scuta*	Floor mosaic	Upper church at Massuh	6th c.	Piccirillo 1997: 252–253; Michel 2001: 301–302
43.	Lotus-band on the tympanum over a dedicatory inscription	Floor mosaic	Upper Chapel of Priest John at Wadi 'Afrit	565	Piccirillo 1997: 174, Fig. 228
44.	Wavy ribbon on interlaced circles framing depictions of sages and Calliope	Floor mosaic	Soueidié villa at Ba'albek	Second half 3rd c.	Chéhab 1957: 29–52; 1959: Pl. XV
45.	Wavy ribbon on interlaced *scuta*	Floor mosaic	Church at Khaldé-Choueifat, northern aisle	Late 5th c.	Chéhab 1957: 107–116; 1959: Pl. LXIX; Donceel-Voûte 1988: 359–371, Fig. 346
46.	Wavy ribbon on interlaced loops	Floor mosaic	Khirbet Munyah	Second half 6th c.	Piccirillo 1997: 299, Fig. 589; Michel 2001: 274–275, Fig. 264
47.	Twisted ribbon on a medallion with a depiction of a tiger	Floor mosaic	Church at Khaldé-Choueifat	Late 5th c.	Chéhab 1957: 107–116; 1959: Pl. LXXVII.2; Donceel-Voûte 1988: 359–371, Pl. 15
48.	Twisted ribbon framing a nave mosaic	Floor mosaic	Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat	557	Piccirillo 1997: 164–165, Figs 210, 213; Michel 2001: 345–347
49.	Twisted ribbon on interlaced *scuta*	Floor mosaic	Church on the Acropolis at Ma'in	719–720	Piccirillo 1997: 200–201, Fig. 307; Michel 2001: 370–371
50.	Three-strand guilloche framing a depiction of a temple facade with a Torah ark	Floor mosaic	Synagogue at Khirbet Samara	4th c.	Magen 2002: 204–215

	Representation	Medium	Location	Dating	Reference
51.	Three-strand guilloche on a frame around a large medallion with an inscription	Floor mosaic	Church of St Bacchus near Horvat Tinshemet	6th c.	Dahari 2012: Fig. 10
52.	Three-strand guilloche on a geometric mosaic	Floor mosaic	Umayyad palace at Khirbet al-Minya	705–715	Talgam 2014: 412–414, Fig. 492
53.	Two-strand guilloche friezes	Wall painting	Tomb of the Busts (Q3) and Tomb of Two Roosters (Q10) at Abila	About 2nd c.	Barbet and Vibert-Guigue 1988–1994: Pls 29–30, 78–79, 84–85
54.	Bands with a two-strand guilloche flanking vault painting	Wall painting	Tomb of Parthenopaios (Q9) at Abila	About. 2nd c.	Barbet and Vibert-Guigue 1988–1994: 155–160
55.	Two-strand guilloche framing ceiling painting	Wall painting	Djel el-Amad tomb near Tyre	About 2nd c.	Barbet 1995: 48, Fig. 6
56.	Two-strand guilloche on the arch of the arcosolium	Wall painting	Tomb of Prometheus at Beit Ras/Capitolias	About 2nd c.	Barbet and Vibert-Guigue 1988–1994: 229–243, Pls 111, 116a
57.	Jeweled medallion with a jeweled cross	Floor mosaic	West Church at Theodorias, Libya	About 540	Alföldi-Rosenbaum and Ward-Perkins 1980: 52, Pls 44.1, 45
58.	Jeweled medallion surrounding a jeweled cross	Wall mosaic	Sant' Apollinare in Classe, Ravenna	549	Rizzardi 2012: 150–155, Fig. 139
59.	Jeweled bands dividing the compositions and delineating the arch	Wall mosaic	Triumphal arch of the Santa Maria Maggiore Church in Rome	432–440	Sieger 1987: 83
60.	Jeweled bands outlining the semi-dome of the apse	Wall mosaic	*Katholikon* of the Latomou Monastery (Church of Hosios David) in Thessaloniki	Late 5th c.	Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 183–184
61.	Jeweled bands framing imperial representations	Wall mosaic	San Vitale in Ravenna	About 540	Spieser 1998: 64
62.	Jeweled bands on frames of intercolumnar panels	Floor mosaic	St Christopher Church at Qabr Hiram (now the Louvre)	575	Donceel-Voûte 1988: 411–420, Figs 405–412
63.	Jeweled bands on window soffits	Wall mosaic	Hagia Sofia narthex, Istanbul	6th c.	Teteriatnikov 2017: 185–186, Figs 45–67
64.	Imagines clipeatae of the deceased	Wall painting	Tomb of the Three Brothers in Palmyra	160 (construction)	Eristov, Vibert-Guigue, and Sarkis, 2006–2007: 149–159
65.	Imagines clipeatae of the deceased	Wall painting	Tomb at Or-ha-Ner	Late 3rd–early 4th c.	Michaeli 1998: Figs 7–11
66.	Imago clipeata of the deceased or the Virgin Mary	Wall painting	Tomb complex XXXI, necropolis of Tyre	Late 3rd–early 4th c.	Chéhab 1985: 620, Pl. CXXIX
67.	Christ and the apostles wearing tunics with clavi and cloaks	Wall mosaic	Santa Pudenziana, Rome	About 400	James 2017: 171–172, Fig. 65
68.	Twelve disciples wearing tunics with clavi and cloaks	Wall mosaic	Dome of the Orthodox Baptistery, Ravenna	458–473	Rizzardi 2012: 75–76, Fig. 47
69.	Martyrs wearing tunics with clavi and cloaks	Wall mosaic	Sant' Apollinare Nuovo, Ravenna	About 561	Rizzardi 2012: 103, Fig. 84

	Representation	Medium	Location	Dating	Reference
70.	Disciples and Evangelists wearing tunics with clavi and cloaks	Manuscript, miniature painting	Rabbula Gospels (cod. Plut. I, 56, fols 10r, 14v), Biblioteca Medicea Laurenziana, Florence	586	Bernabò 2008b: 100–101, 111–112, Pls XIX, XXVIII
71.	Christ and the apostles wearing tunics with clavi and cloaks	Manuscript, miniature painting	Rossano Gospels (042), various folios, Cathedral of Rossano	6th c.	Cavallo 1992
72.	An archer and a spearman wearing tunics with band decoration	Floor mosaic	Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat	557	Piccirillo 1997: 164–165, Figs 201–202
73.	An orans wearing a tunic with band decoration	Textile, wall hanging	Katoen Natie Collection (KTN Inv. 1478-01)	3rd–4th c.	Verhecken-Lammens 2009: 138, Fig. 10
74.	Donors wearing tunics with band decoration	Floor mosaic	Church of SS Cosmas and Damianus at Jerash/Gerasa	533	Piccirillo 1997: 288–289, Fig. 510
75.	Donor in orans pose wearing a tunic with band decoration	Floor mosaic	Church of St George at Khirbet al-Mukhayyat	535/536	Piccirillo 1997: 178, Fig. 247
76.	Men leading animals	Floor mosaic	Old Diakonikon on Mount Nebo	530	Piccirillo 1997: Fig. 166
77.	Man leading a camel	Floor mosaic	Church at Kissufim	576	Cohen 1993; Talgam 2014: 154, Fig. 243
78.	Man leading a bear	Floor mosaic	Church of the Rivers at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 240, Fig. 389; Michel 2001: 415
79.	Peacock, partridge, pigeon and other birds dwelling in a vine trellis	Wall painting	Tomb on the Mount of Olives, Jerusalem	2nd–3rd c.	Bagatti 1974; color plates in Kloner 1975
80.	Peacocks in grid compartments filled with representations of other birds and plants	Wall painting	Tombs Q1 and Q13 at Abila	2nd–3rd c.	Barbet and Vibert-Guigue 1988–1994: 79–80, Pls 11, 16
81.	Peacocks in rectangular panels above the loculi	Wall painting	Tomb Q13 at Abila	2nd–3rd c.	Barbet and Vibert-Guigue 1988–1994: 184, Pls 102, 104
82.	Peacocks perched above an arcosolium	Wall painting	Tomb with depictions of birds at Beit Guvrin	4th/5th c.	Moulton 1921–1922: Pls 2, 4
83.	Peacocks among plants facing each other	Floor mosaic	Church of Multiplication of Loaves and Fishes at Tabgha/Heptapegon	Second half 5th c.	Hachlili 2009: 97, Fig. V-2a
84.	Peacocks symmetrically perched on the lip of a vessel	Floor mosaic	Mahatt el-Urdi	6th c.	Talgam 2014: 100, Fig. 136
85.	Peacocks facing a *kantharos*	Floor mosaic	Armenian burial chapel near the Damascus Gate in Jerusalem	6th c.	Hachlili 2009: 117, Fig. VI-7
86.	Peacocks flanking a tympanum over a dedicatory inscription	Floor mosaic	Chapel of Priest John at Wadi 'Afrit	565	Piccirillo 1997: 174, Fig. 228
87.	Peacocks facing each other perched on top of an arch	Silver plaque (book cover?)	Kaper Koraon, Syria (Metropolitan Museum of Art, Acc. No. 50.5.1)	Second half 6th c.	Frazer 1992: Figs 4, 7

	Representation	Medium	Location	Dating	Reference
88.	Peacocks facing each other perched on top of an arch	Manuscript, miniature painting	Abba Garima I (AG I, fol. 25v), Monastery of Ǝnda Abba Garima, Ethiopia	530–660	McKenzie and Watson 2016: 95–96, 100, Figs 128, 134, Pl. 5
89.	Peacocks facing each other perched on top of an arch	Manuscript, miniature painting	Etchmiadzin Gospels (MS 2374, fol. 1r)	989	McKenzie and Watson 2016: Fig. 145
90.	Partridge and other birds among scattered branches	Wall mosaic	Santa Costanza, Rome	Second half 4th c.	Stern 1958: 202, Fig. 38
91.	Partridges among plants and rocks in Paradise	Wall mosaic	Sant' Apollinare in Classe, Ravenna	549	Rizzardi 2012: 155, Fig. 142
92.	Partridge and other animals surrounding Orpheus/the Good Shepherd	Floor mosaic	Villa at Jenah	Late 5th c.	Chéhab 1957: 64–73; 1959: Pl. XXXI
93.	Partridge with chicks	Floor mosaic	Villa at Lod/Lydda	4th c.	Talgam 2014: 66, Fig. 93
94.	Partridge in a cage	Floor mosaic	Lower church at Khan Khaldé	Mid-5th c.	Donceel-Voûte 1988: 387, Fig. 373
95.	Frieze of partridges	Stucco	Hisham Palace at Khirbet al-Mafjar	First half 8th c.	Hamilton and Grabar 1959: Pl. LIV.6
96.	Pair of partridges facing each other with a vessel with grapes between them	Wall mosaic	Baptistery of San Giovanni in Fonte in the Basilica of St Restituta in Naples	Second half 4th c.	Ferri 2013: Pls 4, 13
97.	Pair of partridges facing each other, inside inhabited scrolls	Floor mosaic	Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat	557	Piccirillo 1997: 164–165, Fig. 202
98.	Confronted pair of partridges facing each other on a bunch of grapes	Floor mosaic	Church of the Rivers at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 240, Fig. 391
99.	Pairs of partridges facing each other	Manuscript, miniature painting	Rabbula Gospels (cod. Plut. I, 56, fols 6v, 7r), Biblioteca Medicea Laurenziana, Florence	586	Bernabò 2008b: 94–95, Pl. XIII
100.	Pairs of partridges facing each other	Manuscript, miniature painting	Abba Garima I (AG I, fols 11r, 12r) Abba Garima III (AG I, fols 4v, 9v)	530–660 350–650	McKenzie and Watson 2016: 118, Pls 34–35, 38–39
101.	Pigeon and other birds among scattered flowers	Wall painting	Ceiling of the Djel el-Amad tomb near Tyre	About 2nd c.	Barbet 1995: 48, Fig. 6
102.	Pigeons in interlaced compartments	Floor mosaic	Chapel in memory of St John the Baptist on the Mount of Olives, Jerusalem	6th c.	Talgam 2014: 198, Fig. 287
103.	Pigeons pecking on grapes inside vine scrolls	Floor mosaic	Chapel at el-Hammām, Beth Shean/Scythopolis	About 530	Talgam 2014: Fig. 116
104.	Medallion with a pigeon pecking seeds	Floor mosaic	Church of the Lions at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 236, Fig. 341
105.	Pairs of doves facing each other among green plants	Manuscript, miniature painting	Abba Garima I (AG I, fols 4v, 9v, 9r, 11r, 12r)	530–660	McKenzie and Watson 2016: 119–120, Pls 34–35, 38–40

	Representation	Medium	Location	Dating	Reference
106.	Doves flanking a large red flower depicted on top of a semi-circular headpiece	Manuscript, miniature painting	Rabbula Gospels (cod. Plut. I, 56, fol. 7v), Biblioteca Medicea Laurenziana, Florence	586	Bernabò 2008b: 96, Pl. XIV
107.	Wading birds in a Nilotic landscape	Floor mosaic	Portico of the Cathedral at Hama/Epiphania	First half 5th c.	Piccirillo 2007: 607, Figs 25–26, Pls XIV–XV
108.	Wading birds in a Nilotic landscape	Floor mosaic	Church of the Multiplication of the Loaves and Fishes at Tabgha/Heptapegon	Second half 5th c.	Michaeli 2013: 127–129, Fig. 10a; Talgam 2014: Figs 256–268
109.	Wading birds in grid compositions	Floor mosaic	Chapel of St John in the Russian compound in Jerusalem	About 6th c.	Talgam 2014: Fig. 130
110.	Wading birds inside inhabited scrolls	Floor mosaic	Church at Shellal	570	Talgam 2014: Fig. 122
111.	Pair of parakeets facing each other, flanking a Phoenix	Wall mosaic	Baptistery of San Giovanni in Fonte in the Basilica of St Restituta in Naples	Second half 4th c.	Croci 2019: Fig. 14 on pages 80–81
112.	Parakeet in inhabited scrolls	Floor mosaic	Chapel at Ain el-Bad	Early 6th c.?	Donceel-Voûte 1988: 17–19, Fig. 1
113.	Parakeets in medallions	Floor mosaic	Church of the Lions at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 236, Figs 338, 342–343
114.	Parakeets inside compartments of grid mosaics	Floor mosaic	Diakonikon of the church at Soran	About 6th c.	Donceel-Voûte 1988: 301–307, Fig. 299
115.	Parakeet and other animals surrounding Orpheus/the Good Shepherd	Floor mosaic	Villa at Jenah	Late 5th c.	Chéhab 1957: 64–73; 1959: Pl. XXXI
116.	Pattern of pairs of parakeets facing each other	Floor mosaic	Church of the Apostles at Madaba	578	Piccirillo 1997: 106–107, Figs 80–81
117.	Parakeets facing other birds	Manuscript, miniature painting	Rabbula Gospels (cod. Plut. I, 56, fols 9v, 11v), Biblioteca Medicea Laurenziana, Florence	586	Bernabò 2008b: 99–100, 103, Pls XVIII, XXII
118.	Pheasant perched on the lip of a vessel	Floor mosaic	Khirbet Moûqa	Late 4th c.	Donceel-Voûte 1988: 159–167, Fig. 135
119.	Pheasant and peacock facing a central silver *kantharos* from which vines emerge	Floor mosaic	Lower church at Khan Khaldé	Mid 5th c.	Donceel-Voûte 1988: 385–392, Fig. 373
120.	Two pheasants bowing to a golden cross	Floor mosaic	Church at Aluma	6th c.	Talgam 2014: Fig. 270
121.	Ram tied to a tree depicted in a medallion	Floor mosaic	Lower church at Massuh	5th c.	Piccirillo 1997: 254, Fig. 447; Michel 2001: 300
122.	Ram tied to a tree	Floor mosaic	Cathedral of Madaba	Second half 6th c.	Piccirillo 1997: 118, Fig. 117
123.	Gazelles with dotted backs plucking on a tree	Floor mosaic	Church of the Holy Martyrs Lot and Procopius at Khirbet el-Mukhayyat	557	Piccirillo 1997: 152–163, Fig. 213 upper right

	Representation	Medium	Location	Dating	Reference
124.	Stag with dotted back depicted inside inhabited scrolls	Floor mosaic	Church of al-Khadir at Madaba	6th/7th c.	Piccirillo 1997: 129–131, Fig. 149
125.	Gazelle with dotted back and a bell on its neck	Floor mosaic	Theotokos Chapel on Mount Nebo	6th c.	Piccirillo 1997: 151, Fig. 173
126.	Ram and stag(?) reaching for the foliage of fruit trees	Floor mosaic	Lower church at Khan Khaldé	Mid 5th c.	Hélou 2019: 60–63
127.	Sheep nibbling a tree	Floor mosaic	Church at Kissufim	576	Cohen 1993; Talgam 2014: Fig. 164
128.	Gazelles plucking leaves	Floor mosaic	Church of the Lions at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 236–237, Figs 338, 340
129.	Hunt with lions and other wild beasts	Floor mosaic	Nile Festival Building at Sepphoris	About 400	Talgam 2014: 164, Figs 159, 261
130.	Hunt with lions	Floor mosaic	Triclinos building at Apamea (now Musées royaux d'Art et d'Histoire, Brussels)	Mid 5th or early 6th c.	Dunbabin 2012: 183, Fig. 196
131.	Animal chase with lions	Floor mosaic	Mezra'a el-Oulia	Late 5th c.	Donceel-Voûte 1988: 178–186, Fig. 150
132.	Motif of *philia*: lion facing a bull	Floor mosaic	Lower baptistery chapel of the Madaba Cathedral	Early 6th c.	Piccirillo 1997: 119, Fig. 122; Michel 2001: 308
133.	Motif of *philia*: lion facing a bull	Floor mosaic	Mosaic of Paradise at Madaba	Second half 6th c.	Piccirillo 1997: 128, Fig. 139
134.	Lion and lioness sitting on top of two mountains above other exotic animals	Floor mosaic	Villa at Lod/Lydda	4th c.	Talgam 2014: 66, Figs 94–95
135.	Lion and other animals listening to Orpheus play	Floor mosaic	Mosaic from Shahba/Philippopolis	Early 4th c.	Balty 1983: Pl. XXIV.1
136.	Lion and other animals surrounding Orpheus/the Good Shepherd	Floor mosaic	Villa at Jenah	Late 5th c.	Chéhab 1957: 64; 1959: Pl. XXXI
137.	Adam naming animals	Floor mosaic	Northern Church at Hawarte	501/502	Donceel-Voûte 1988: 102–116, Fig. 71
138.	Lion and other animals listening to King David play	Floor mosaic	Synagogue at Gaza	508/509	Talgam 2014: 322, Fig. 399
139.	A display of various animals, including felines	Floor mosaic	Church of St George at Houad	568	Donceel-Voûte 1988: 138–145, Fig. 109
140.	Pair of lions facing an inscription	Floor mosaic	Synagogue at Hammat Tiberias	4th c.	Hachlili 2013: Fig. IX-10
141.	Pair of lions flanking a cross	Floor mosaic	Church at 'Ozem	431	Talgam 2014: 159, Fig. 251
142.	Pair of lions flanking a menorah	Floor mosaic	Synagogue at Ma'on	About 538	Talgam 2014: 91, Figs 124, 495
143.	Two lions flanking a tree and facing each other	Floor mosaic	Church of the Lions at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 236, Figs 338–339
144.	Hunt scene among trees and generic plants growing from strips of ground	Floor mosaic	Diakonikon at Jabaliyah, Gaza	Mid 5th c.	Humbert et al. 2000: 124

	Representation	Medium	Location	Dating	Reference
145.	"Freestanding" plants	Floor mosaic	Church of Multiplication of the Loaves and Fishes at Tabgha/Heptapegon	Second half 5th c.	Michaeli 2013: Fig. 10a; Talgam 2014: Fig. 154
146.	Animals and hunt scenes among generic plants growing from yellow strips of ground	Floor mosaic	Church at Kissufim	576	Cohen 1993; color photographs in Talgam 2014: Figs 148–149, 163–164
147.	Birds and scattered flowers surrounding a funerary portrait and a dedicatory inscription	Wall painting	Tomb H60 at Abila	Late Roman	Smith and Mare 1997: 311–312, Figs 7, 9
148.	Flowers on green stems	Wall painting	Tomb Q18 at Abila	2nd/3rd c.	Barbet and Vibert-Guigue 1988–1994: 208, Fig. 101
149.	Bushes with red flowers flanking a cross within a wreath; shrubs with flowers	Wall painting	Tomb with Biblical Scene in Lohamey haGettaot	4th/5th c.	Michaeli 2009: 132, Figs 169, 173, 183–186
150.	Bushes with red flowers flanking the figure of the Good Shepherd	Wall mosaic	Baptistery of San Giovanni in Fonte in the Basilica of St Restituta in Naples	Second half 4th c.	Croci 2019: Figs 9–10 on page 76
151.	Plants with red flowers in a heavenly landscape	Wall mosaic	Sant' Apollinare in Classe, Ravenna	549	Rizzardi 2012: Fig. 142
152.	Scattered generic flowers in a hunt scene	Floor mosaic	Nile Festival Building at Sepphoris	About 400	Talgam 2014: 260–261, Fig. 159
153.	Scattered generic flowers in a hunt scene	Floor mosaic	Old Diakonikon at Mount Nebo	530	Piccirillo 1997: Fig. 166
154.	Fruit trees in pastoral/hunting scenes	Floor mosaic	Diakonikon at Jabaliyah, Gaza	Mid 5th c.	Humbert et al. 2000: 124
155.	Fruit trees in pastoral/hunting scenes	Floor mosaic	Old Diakonikon at Mount Nebo	530	Piccirillo 1997: 146, Fig. 166
156.	Animals standing between fruit trees	Floor mosaic	Church of the Apostles at Madaba	578	Piccirillo 1997: 106, Fig. 92
157.	Lions and gazelles between fruit trees	Floor mosaic	Church of the Lions at Umm er-Rasas/Kastron Mefa'a	Late 6th c.	Piccirillo 1997: 236–237, Figs 338–339
158.	Motif of *philia* with four types of fruit trees	Floor mosaic	Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat	557	Piccirillo 1997: 164–165, Fig. 213
159.	Motif of *philia* with four types of fruit trees	Floor mosaic	Mosaic of Paradise at Madaba	Second half 6th c.	Piccirillo 1997: 128, Fig. 139
160.	Birds pecking on date palms	Wall mosaic	Baptistery of San Giovanni in Fonte in the Basilica of St Restituta in Naples	Second half 4th c.	Ferri 2013: Pls 2, 8
161.	Palm trees between a procession of martyrs	Wall mosaic	Sant' Apollinare Nuovo, Ravenna	About 561	Rizzardi 2012: 103, Figs 84–85
162.	Pigeons pecking on dates	Floor mosaic	Villa at Jenah	Late 5th c.	Chéhab 1957: 61; 1959: Pl. XXVII; Hélou 2019: 80, Fig. 79

	Representation	Medium	Location	Dating	Reference
163.	Two caprine animals flanking a palm tree with dates	Floor mosaic	Church of St George at Khirbet al-Mukhayyat	535/536	Piccirillo 1997: 178–179, Fig. 250
164.	Large palm tree with dates depicted between two smaller palms	Floor mosaic	Kathisma Church, between Jerusalem and Bethlehem	8th c.	Talgam 2014: 399–400, Fig. 481
165.	Carpet of flower buds and depiction of peacocks	Floor mosaic	Church at Dibsi Faraj	Late 4th c. or later	Donceel-Voûte 1988: 69–77, Fig. 43
166.	Grid made of flower buds	Floor mosaic	Church at Tell Amarna	Early 5th c.	Waliszewski 2011: 52–53, Pl. 3.3
167.	Grid of flower buds with four-petal flowers inside	Floor mosaic	Church at Kursi	About 585	Donceel-Voûte 1988: 167–174, Fig. 137
168.	Grid of flower buds with four-petal flowers inside	Floor mosaic	North-West Church at Hippos-Sussita	6th to mid-8th c.	Burdajewicz 2005
169.	Grids of stance-like flowers and buds	Floor mosaic	Church of St Peter at Khirbet es-Samra	First half 7th c.	Michel 2001: 202–205, Fig. 173
170.	Scrolls on Late Antique silver book covers	Silver plaque	Kaper Koraon, Syria (Metropolitan Museum of Art, Acc. No. 47.100.36)	Second half 6th c.	Frazer 1992: 72, Fig. 12
171.	Inhabited scrolls	Textile	Metropolitan Museum of Art (Acc. No. 09.50.2313)	5th–7th c.	Metropolitan Museum of Art Online Catalog
172.	Vine and acanthus scrolls without animated creatures	Sarcophagi, carved stone	Jerusalem, Judea	1st c.	Foerster 1998: 305–307, Pl. 122
173.	Inhabited scrolls	Floor mosaic	Synagogue at Gaza	508/509	Hachlili 2009: 112, Fig. VI-1
174.	Inhabited scrolls	Floor mosaic	Church at Petra	550	Hachlili 2009: Pls VI.6–VI.8
175.	Inhabited scrolls	Floor mosaic	St Christopher's Church at Qabr Hiram (now the Louvre)	575	Donceel-Voûte 1988: 411–420, Fig. 403
176.	Inhabited acanthus scrolls surrounded by a frame of vine scrolls	Floor mosaic	Church of Bishop Sergius at Umm er-Rasas/Kastron Mefa'a	587/588	Piccirillo 1997: 234–235, Fig. 365
177.	Flowers, birds, and mythological figures among winding branches of grape-laden vines	Wall painting	Painted House in Petra	Late 1st c. BCE or early 1st c. CE	Twaissi, Abudanh, and Twaissi 2010: 31; Vibert-Guigue 2016: 333, Fig. 7
178.	Vegetal scrolls inhabited by birds	Wall painting	Loukianos Tomb (Q1) at Abila	2nd/3rd c.	Barbet and Vibert-Guigue 1988–1994: 76–80, Pls 11, 16
179.	Children (*putti*?) harvesting grapes; beasts, birds, and a Gorgon mask among branches of vine trees	Wall painting	Hypogeum in Ascalon	3rd–4th c.	Ory 1939: Fig. 2
180.	Vine growing from a *kantharos*; various birds dwelling inside scrolls	Wall painting	Tomb with Biblical Scene in Lohamey haGettaot	4th/5th c.	Michaeli 2009: 133, Figs 202–207

	Representation	Medium	Location	Dating	Reference
181.	Vine growing from a *kantharos*	Wall painting	Burial cave at Jabal al-Joufa, Amman/ Philadelphia	Date uncertain	Zayadine 1985: 153, Fig. 9; Vibert-Guigue 2016: 340, Fig. 15
182.	Scrolls painted on pilasters flanking the entrance and an arch above it	Wall painting	Tomb of the Three Brothers in Palmyra	160	Eristov, Vibert-Guigue, and Sarkis 2006–2007: 150; Buisson et al. 2015: Figs 2, 7
183.	Scrolls on pilasters flanking the entrance	Wall painting	Tomb at Tyre	2nd c.	Dunand 1965: Pl. II
184.	Scrolls in band composition, with images of running prey chased by a lion	Wall painting	Tomb of Candelabra (Q4) at Abila	2nd/3rd c.	Ma'ayeh 1960: 116, Pl. VI; Barbet and Vibert-Guigue 1988–1994: 120–123, Pls 52a, 54ab
185.	Stylized acanthus scrolls in band composition with depictions of fruit, leaves, and a lizard	Wall painting	Tomb with Biblical Scene in Lohamey haGettaot	4th/5th c.	Michaeli 2009: 132, Figs 174–181
186.	Vegetal scrolls containing fruit	Floor mosaic	Basilica of Nativity in Bethlehem	Late 4th/ early 5th c.	Talgam 2014: 157–158, Figs 110, 249
187.	Vegetal scrolls containing fruit	Floor mosaic	Church of Deacon Thomas in the 'Uyun Musa Valley	First half 6th c.	Piccirillo 1997: 187, Figs 261–262
188.	Vegetal scrolls containing fruit	Floor mosaic	Church of the Apostles at Madaba	578	Piccirillo 1997: 106, Fig. 80
189.	Slender running dog	Floor mosaic	Church of the Deacon Thomas in the 'Uyun Musa Valley	First half 6th c.	Piccirillo 1997: 187, Fig. 254
190.	Slender running dog	Floor mosaic	Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat	557	Piccirillo 1997: 164, Fig. 207
191.	Grids of octagons, hexagons, and squares	Wall painting	Tomb of the Three Brothers in Palmyra	160 (construction)	Eristov, Vibert-Guigue, and Sarkis 2006–2007: 151, 152, Figs 2, 4, 9, 14
192.	Grids of octagons, hexagons, and squares	Wall painting	Tombs H2, Q2, and Q3 at Abila	About 2nd c.	Barbet and Vibert-Guigue 1988–1994: 86–90, 98, 99, 110–112, 217–218, Figs 56, Col. Pl. 2, Pls 20–25, 31–33
193.	Grid of colorful floral rosettes against a dark blue background	Vault mosaic	Mausoleum of Galla Placidia, Ravenna	About 425	Rizzardi 2012: 44–55, Fig. 29
194.	Grid with depictions of various birds inside compartments	Vault mosaic	Vault of a vestibule in the Archiepiscopal Palace at Ravenna	494–519	Rizzardi 2012: Figs 89, 92

Chapter 6

THE WALL PAINTINGS IN CONTEXT: ARCHITECTURAL SETTING, MEANING, AND CHRONOLOGY

6.1 Archaeological context: basilica or houses?

The discussion of meaning and chronology of the wall paintings, that is to say, the iconographic program, style and dating of the fragments preserved in this assemblage, as well as their architectural setting, will benefit from a clearer understanding of the ambiguity surrounding their original discovery context.

The main obstacle to determining the archaeological context of the wall paintings discussed here is the missing documentation from the excavation campaigns of 1975 and 1987, either lost or never properly executed. The wall paintings photographed in color by Saidah can generally be assumed to come from the residential district. A plan surviving in the archives of the DGA shows that Saidah's works were confined to that part of the site (Waliszewski et al. 2008: Fig. 2) [see above, *Fig. 2-14*]. There is no mention of any church in his article from 1977, in which he draws a vivid picture of the religious community of Porphyreon. It would mean that he had not explored that part of the site and indeed may have been unaware of the existence of a large basilica (Q) right next to the residential district.

Excluding two campaigns devoted to clearing debris from Basilica Q, the PCMA-DGA expedition confined its work to the residential district and generally remained within the borders of the area previously excavated by Saidah (save for a few additional rooms on the perimeters of the sector and in Sector E; see Gwiazda and Waliszewski 2014) [see above, *Fig. 2-14*]. The fragments of paintings recovered at that time appear to have been reburied by Saidah in the backfill from his excavation: two of them (*Cat. 108*, *188*) were actually recognized in the archival slides, 16 further paintings were coated with varnish that must have been applied by his team (see above, *§ 4.3*). However, the provenance of particular fragments within the residential sector remains obscure: it is not clear whether they came from different houses, and if so, from which ones, or whether they were all found in residential Complex 8, which is the largest and yielded several bronze liturgical objects. The latter possibility seems unlikely due to the great number of fragments and their iconographic and stylistic diversity, which simply would not have fitted inside a single residential complex.

Work in 1987 was concentrated in Basilica Q and centered on the evacuation of the floor mosaics from the structure. Hence, the assemblage of paintings recovered at that time came most probably from the basilica. Nevertheless, the present research has demonstrated that three of the fragments retrieved during the 1987 campaign had previously been found by Saidah in the residential district. *Cat. 4* and *Cat. 169a* appear in Saidah's slides, whereas *Cat. 70* is coated with the type of varnish that was applied at the time of his works (see above, *§ 4.3*). It is possible that fragments left lying around on the site after 1975 were picked up by the team working in 1987 and mixed with the paintings they found in the basilica.

This apparent mix-up should be kept in mind throughout the discussion of the iconography and style of the wall paintings from the two complexes. Analyses of mortars and plasters from fragments retrieved from Basilica Q (*Cat. 214*, *246*, *252*) and residential Sector D (*Cat. 62*, *169a*, *226*) show very slight differences between the composition of the renders belonging to these two assemblages (see above, *§ 3.4* and *§ 3.5*). A complete study of the composition of mortars and plasters—beyond the financial and temporal scopes of the present research—could possibly help in establishing or ascertaining the provenance of particular fragments, although it would require about 250 samples multiplied by two (one sample of the mortar and one of the plaster for each painting fragment) to be analyzed.

In the following discussion of the iconographic programs of the basilica and the houses, it will be generally accepted that except for the three fragments proven to have been discovered by Saidah, the fragments retrieved in the 1987 campaign came from the basilica, likely from its eastern end.[1] The eastern half of the building, being farther from the shore, was buried deeper under the dunes and suffered less from spoliation of building materials; therefore, it had survived in much better condition.

6.2 Architectural setting and iconographic programs of the wall paintings

6.2.1 Location of motifs in the basilica

Only two fragments of wall paintings were documented *in situ* in the basilica: a cross in a wreath (*Cat. 44*) located above and to the left of the apse and a vertical band with a wavy-ribbon pattern (*Cat. 76*) in the northeastern corner of a room adjacent to the basilica from the south, provisionally interpreted as a chapel. Nevertheless, an approximate setting can be suggested for some of the fragments based on the shape of the masonry elements they are fixed to and, in some cases, the presence of plaster on more than one surface.

One of the masonry elements the setting of which is betrayed by its shape is *Cat. 94*. The stone is fully dressed and has a neatly carved curvature on its bottom left side, indicating that it had been located above an arched opening, such as an apse or an arched passage. The peacock depicted on this fragment was almost certainly faced by a symmetrical, rightward looking peacock. This compositional arrangement is paralleled by a number of monumental decorations, as well as objects of the minor arts, showing a pair of facing peacocks perched on an arch [see above, *§ 5.5.1* and *Figs 5-33*, *5-34*]. However, its exact location inside the basilica cannot be determined. It could not have been placed above the apse in the presbytery, because there is no room for such a large stone element in the well-preserved east wall. An architectural study by the PCMA-DGA expedition documented evidence of two other apses [see above, *Fig. 2-7*]: one with a span of 3 m in the southern aisle of the basilica[2] and another one, about 3.65 m wide, in the presumed chapel in the southeastern corner of the basilica. Neither of the two matched the fragment in question. The radius of the circle, the section of which constitutes the curvature of this

[1] This was confirmed with Nora Joumblatt, who visited the site during the excavations of 1987 (personal communication).

[2] Measurements taken from an architectural plan of the basilica drawn by Marek Puszkarski.

fragment (*Cat. 94*), is about 0.84 m, which indicates that the arch had a diameter of about 1.68 m.[3] Furthermore, the fragment in question had to be placed on top of a set of voussoirs responsible for the load-bearing capacity of the arch [*Fig. 6-1*]. Therefore, in order to estimate the width of the passage in question, the span of 1.68 m should be further reduced by double the height of the voussoirs. Although the dimensions of these voussoirs are not known, the arched aperture must have been relatively small, probably less than 1.5 m wide. Thus, we could be dealing with a small arched passage.

Cat. 129 is a small, triangular element, which was also dressed for setting above an arch, since its bottom side is slightly concave. It features a depiction of generic plants, similar to *Cat. 94*. Nevertheless, its curvature appears to be based on a much smaller radius than that of *Cat. 94*.

Another group of masonry elements clearly belonging to an archway is that of *Cat. 171–176*. The fragments constitute a single set of voussoirs featuring an inhabited scroll on the faces and a floral grid on the intrados. The span of this arch, calculated on the basis of the curvature created by the voussoirs placed side by side, measures about 1.72 m on the intrados and about 2.44 m on the extrados [*Fig. 6-2*]. Its location inside the basilica is likewise difficult to determine, because the dimensions do not match either of the preserved apses. Furthermore, the fact that the intrados was decorated with a floral grid suggests that the arch in question belonged to a vaulted space rather than a semi-dome above an apse. As will be shown further on, floral grids or similar geometrically arranged repetitive patterns were common on vaults and under-arches in the Roman-period and in Late Antique monumental decoration. The probability that we are dealing here with a vault or an under-arch rather than a semi-dome is further corroborated by the fact that the concavity of a semi-dome would have distorted the layout of a floral grid. On the fragments in question, if the reading of the partly abraded paint layer is correct, the grid appears to be straight. In conclusion, *Cat. 171–176* could have belonged to an arched passage, or to an archway leading to a vaulted room. They could have also belonged to arcades separating the nave from the aisles. Nevertheless, given the barely traceable internal divisions of the basilica, it is impossible to indicate the distance between the columns or pillars supporting the presumed arcades and to state whether their span matched that of the proposed arch.

The other voussoirs, *Cat. 177* and *Cat. 178*, must have belonged to different arches than the voussoirs discussed above. *Cat. 177* features the motif of inhabited scrolls on its face, but it was executed against a white background, unlike the fragments just discussed, which were set against a pale yellow color. *Cat. 178* appears to depict monochrome red scrolls; here the painting occupied the intrados surface of the arch.

The third assemblage of masonry elements, the shape of which betrays that they belonged to an arch, includes four fragments collected under *Cat. 79*. They are slightly curved and have a triangular profile with a rounded edge [*Fig. 6-3*]. They all had the back trimmed, and so, their depths are unknown. Three sides of the profile are plastered and the front is decorated with a series of red triangles topped with trefoils. Three of these fragments are sections of an arch, whereas the fourth one has a "label stop" (a carved, plastered ending indicating that it had been set at the termination of the arch). The curvature of these elements appears to have a rather large

[3] The radii of the arches discussed in this section are approximate because they were calculated based on the dimensions and curvature of particular stone elements, which in each of the cases is relatively small.

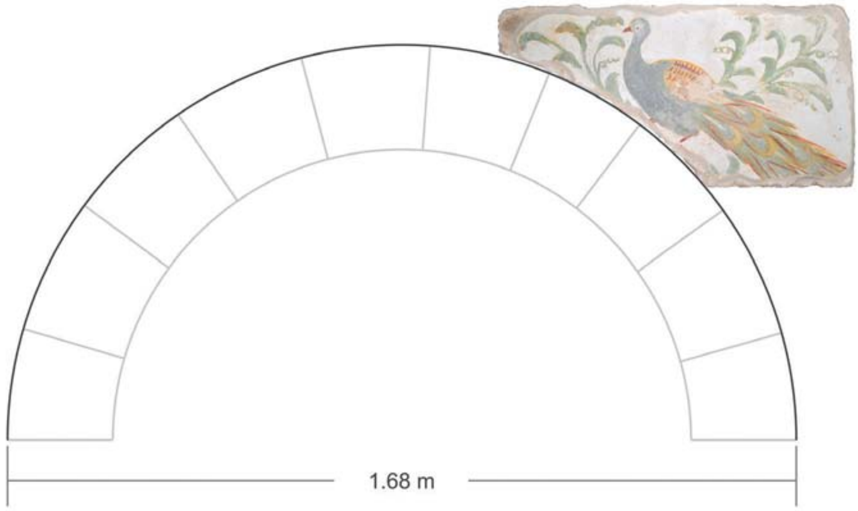


Fig. 6-1. Hypothetical reconstruction of the setting of *Cat. 94* on top of an arch and the estimated span of the arch



Fig. 6-2. Hypothetical reconstruction of the inhabited scroll on the face of an arch and the estimated span of the arch



Fig. 6-3. Different sides of *Cat. 79b*: top, the top plastered surface; center, plastered and painted front; bottom, back side trimmed with an angle grinder; center left, section view

radius in proportion to their flat shape. Such an arch could not have had a high load-bearing capacity, so the elements in question most likely topped an arch made of "true" voussoirs. They could have constituted a hoodmold (also referred to as "label" among others), that is, a projecting molding running along the top of an arch [*Fig. 6-4*]. Similar hoodmolds can be seen, for example, above a niche, an arched entrance, and a small apsis inside the northern apse of the Southern Church at Shivta/Sobota (Segal 1988: 110–115) [*Fig. 6-5*]. The last example has remains of a series of red triangles, painted directly on the stones. The hoodmold above the entrance to Tomb 4112C at the necropolis of Tyre also provides a parallel for this kind of projecting and painted element (Chéhab 1985: 630).

As with the representation of a peacock (*Cat. 94*) and the voussoirs discussed above, the place of the hoodmold decorated with red triangles in the basilica cannot be established. The calculated span of the inner curve of the molding measures about 1.77 m. As with *Cat. 94*, this dimension should be further reduced by double the height of the voussoirs that supported the molding [*Fig. 6-6*]. Therefore, the width of this archway was probably only about 1 m. Thus, it is possible that the hoodmold topped a small opening or a niche like the one at Shivta/Sobota.

The most curious of all the masonry members dressed to a particular, non-standard shape is *Cat. 77*. Like all the fragments discussed thus far, it also had the back trimmed in the past, so its original dimensions are lost. It has a projecting profile, the front of which is decorated with a band of "gemstones" bordering a plain white background; the feathers of a peacock's train touch the edge of the gemmed band [*Fig. 6-7* top]. It is not obvious how the fragment should be viewed, and so, the interpretation of its architectural setting is ambiguous. One possibility is that



Fig. 6-4. Visualization of the elements of a hoodmold above a niche



Fig. 6-5. Hoodmold with painted red triangles above a small apsis in the northern apse of the Southern Church at Shivta/Sobota

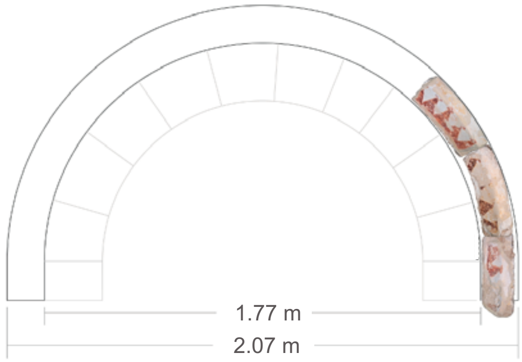


Fig. 6-6. Reconstruction of the setting of elements of a hoodmold above an arch and the estimated span of the arch

the gemmed band constituted a horizontal frieze and the projecting profile acted as a cornice. Let us first consider the situation when the gemmed band runs along the upper edge of the fragment [*Fig. 6-7* bottom]. A painted frieze of this kind with a downwards tilted profile could easily be seen from the ground even if the cornice was placed above the viewer's eye level. At the same time, the opposite side of the profile, which was covered with plain plaster, would not have been seen. However, the direction of the feathers of the peacock's train does not support such an interpretation. When the train is folded, the feathers should be directed downwards, as can be seen on *Cat. 94*. In the assumed orientation of *Cat. 77*, they seem to be awkwardly pointing upwards. However, if the fragment is rotated so that the gemmed band runs along its bottom edge, the train appears to be in its natural position [*Fig. 6-7* top]. But then the gemmed band is not well visible assuming the cornice was set above eye level, and instead the viewer would see the undecorated white plaster covering the opposite side of the profile. The third option, perhaps the least feasible, assumes a vertical orientation of the fragment. The gemmed band would have to run along its right edge in order to keep the peacock's feathers directed downwards. The projecting profile would then be part of the vertical section of a hoodmold framing or emphasizing an opening like a niche or apse. Since *Cat. 77* is the only surviving member dressed to such a shape



Fig. 6-7. The different sides of *Cat. 77*: top, front face in the center, flanked by the two lateral surfaces on either side, and the plastered but unpainted bottom surface below; bottom, the same element oriented with the gemmed band running along its top edge

(although missing the back part) and bearing this kind of decoration, the question of its orientation and architectural setting cannot be resolved. Nevertheless, it can be said that the projecting profile with a gemmed band marked either a vertical or a horizontal architectural feature.

Another group of fragments for consideration covers masonry members that are plastered not only on the face but also on one of the sides (*Cat. 14*, *42*, *81*, *97*, *98*, *122*, *132*, *255*). The presence of plaster on one of the lateral surfaces indicates that the elements in question were placed next to an opening of some kind—a niche, doorway, apse, or window. In all of these cases, the plaster on the lateral surface is plain. All fragments, except for *Cat. 81*, had their back sides trimmed with an angle grinder. *Cat. 14* has the letter *alpha* painted on its face which, almost certainly, accompanied a depiction of a cross. The plaster is folded over the left edge of the ashlar and continues on its side, indicating that the painting was placed to the right of an opening [*Fig. 6-8*]. Also, *Cat. 42*, which depicts a schematic jeweled(?) cross, has one of the sides of the ashlar plastered. It is plausible that these fragments constituted compositions in which two crosses



Fig. 6-8. Three-quarter view of *Cat. 14* showing the plaster extending over the side of the ashlar

symmetrically flank an opening. Such a compositional scheme can be paralleled by the images of two crosses and inscriptions flanking the passage from courtyard D11 to room D12 in residential Complex 8 (*Cat. 187*, *188*).

Plaster folded over one of its sides is present also on *Cat. 81* (whether it is the left or right side cannot be determined because the orientation of the block is unknown). The assumption is that the motif represents a column, either made of marble or decorated with a series of laurel-like leaves (see above, *§ 5.3.4*). This interpretation finds parallels in depictions of arched headpieces in illuminated codices. Having these parallels in mind, one may imagine a painted imitation of piers flanking a niche, apse, passage, or window, topped with a constructed or painted arch. Such an iconographic motif appears in a burial chapel at Homs/Emesa, where two columns supporting an arch framed a niche with a depiction of a jeweled cross [see above, *Fig. 5-4* left].

In the case of two fragments with partridges pecking on small generic plants, *Cat. 97* has the plaster folded over its right edge, whereas *Cat. 98* has its left side plastered, indicating that this pair of birds faced each other from the opposite sides of an opening in the wall [*Fig. 6-9*]. *Cat. 122*, with remains of a painting reminiscent of a bird's breast, has the plaster folded over the right-hand edge and continuing on the side (the presumed bird faces the edge). Its setting within the architecture of the building could have resembled the one described above. *Cat. 132* and *255* also have plaster on one of their sides, but they are too poorly preserved to support an interpretation.

Finally, *Cat. 45c*, *78*, and *150* were plastered on two opposite sides, with one side painted and the other plain [*Fig. 6-10*]. The depth of ashlars *Cat. 45c* and *Cat. 78* is about 40 cm, suggesting that they could belong to either of the walls separating the presbytery from the aisle, also 40 cm thick.[4] Nevertheless, as already noted, evidence of other internal divisions of the basilica is scarce, therefore it cannot be excluded that these fragments come from other, no longer extant walls that were also 40 cm thick. Ashlar *Cat. 150* is only 20 cm deep, so it is likely to have belonged to a light partition wall.

[4] Nora Joumblatt, who visited the site during the 1987 excavations, recalls that the excavation team dismantled the wall separating the presbytery from the southern aisle (personal communication). It is thus possible that the paintings in question come from that wall.

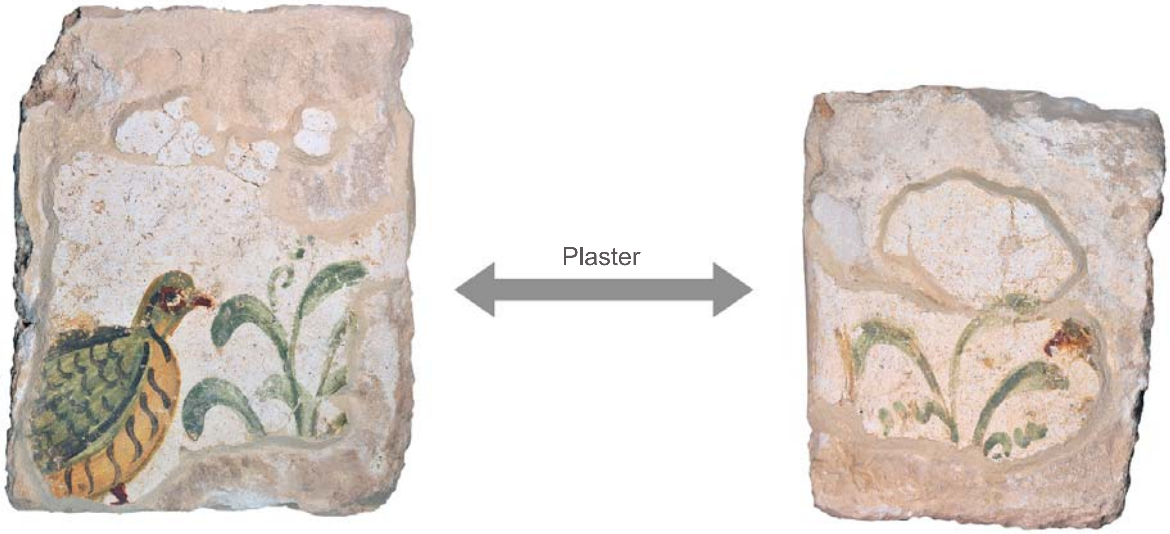


Fig. 6-9. A pair of partridges pecking on plants depicted on either side of an opening in a wall (*Cat. 97* and *Cat. 98*); plastered lateral surfaces indicated with arrows



Fig. 6-10. Two opposite sides of *Cat. 78* in three-quarter view: left, the face with painted decoration; right, the face with plain white plaster. Note how the ashlar was cut into two pieces in order to separate the painted side from the bulk of the stone

6.2.2 Iconographic program of wall paintings from the basilica

The fragments of wall paintings from the basilica represent nearly all the subjects discussed in Chapter 5: simple red crosses, jeweled crosses inside a wreath or medallion, geometric motifs, depictions of animals, plants, inhabited scrolls, and painted inscriptions [*Table 6-1*]. There are just a few fragments that could be ascribed to representations of human figures, and of these only one can be accepted as such beyond doubt. No fragments of the cursory, monochrome genre(?) scenes attested in the residential district were found in the basilica.

Table 6-1. Types and numbers of representations coming from the basilica

Type of representation (following iconographic categories adopted in Chapter 5)	Catalog	Number of individual representations	Number of fragments
Simple red crosses	*8, 9, 13, 14, 18–22*	9	9
Jeweled crosses and fragments of medallions	*30, 36, 42–45, 48, 49, 53, 54, 59, 60, 66, 68, 71–74*	18	24 + 1 *in situ*
Geometric motifs	*76–79, 81, 82*	6	8 + 1 *in situ*
Human figures	*88, 91–93*(?)	4	4
Animals	*94, 97, 98, 100, 104, 107, 110, 115, 121, 122, 124–127*(?)	14	15
Vegetal motifs	*128, 129, 131–133, 137, 138, 140, 141, 143–146, 148–150, 153–155, 160, 162, 168, 171b, 173b, 174b, 175b, 176b*	23	27
Inhabited scrolls	*170, 171a, 172, 173a, 174a, 175a, 176a, 177, 178*	4	10
Painted inscriptions	*88, 194, 196–200, 202–204, 206–208*	13	15

"A thousand crosses"

One of the most noticeable features of the decoration of the basilica is the multitude of crosses, either simple red ones or jeweled crosses with or without the medallions and wreaths. Within the latter group, 18 individual representations can be discerned based on the different renderings of the crosses and different designs featured in the medallions. A large wreath enclosing a jeweled cross was still visible on the east wall of the basilica at the beginning of the 21st century (*Cat. 44*). Its setting to the left of the axis of the nave suggests the presence of a symmetrical wreath to the right of it, while a significant number of recovered cross fragments indicate that it was a recurring motif throughout the basilica.

A predilection for crowding the interior of a church with "a thousand crosses" is criticized by Nilus of Sinai (d. about 430) who, in a letter to the Prefect Olympiodoros, instructs the addressee that one cross would suffice as a sign of a "firm and manly mind." He also allows a cross to be rendered in each "compartment" of the nave "which is divided into many compartments of different kinds" (*Epistulae* IV, 61; quoted after Mango 1986: 33). It is impossible to say which of the iconographic concepts—the one criticized or the one recommended by Nilus—was more common in Late Antique churches because the available evidence is greatly limited. Some examples of single monumental crosses survive in the semi-domes of the apses, such as the wall painting in Basilica A at Resafa (6th century; Ulbert 1986: 87, Fig. 52, Pl. 33.l) [see above, *Fig. 5-56*] or the carved crosses in churches in the Tur Abdin region in southeastern Turkey (e.g., Mar Cyrianus at Arnas and Mar 'Azaziel at Kefr Zeh; early 8th century?; Bell and Mundell Mango 1982: 99,

120, Pls 101, 158) and Lycia (monastery churches of St Sion and St John; second half of the 6th century; Niewöhner 2020: 193–194, Figs 6–7). It cannot be excluded that other depictions of crosses, now lost, were present in these churches, perhaps painted or executed in the mosaic technique. For example, the vault mosaic in the Mar Gabriel Church at Kartmin shows three medallions with crosses: a large one flanked by two slightly smaller ones (512; Hawkins, Mundell, and Mango 1973: 285–287, Figs 7, 18–21; James 2017: 217–218, Fig. 82) [see above, *Figs 5-15*, *5-25*]. In Hagia Sophia, a large cross was located in the main dome as recorded by Paulus Silentiarius (*Descriptio S. Sophiae*, 489); numerous smaller crosses may also be seen on the wall and vault mosaics in the inner narthex, at the entrances to the aisles, and in the galleries (532–537 and 558–562/563; Teteriatnikov 2017: 51–66, 91–106, 168–173). The extant crosses come in a number of sizes and forms, from simple, contoured crosses depicted against a plain gold background through jeweled crosses and crosses in medallions (see Teteriatnikov 2017: Figs 51, 116, 206, 208). The motif of the cross could have been similarly ubiquitous in the wall mosaic decoration of the Church of Acheiropoietos at Thessaloniki (second half of the 5th century; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 199–237). Nearly all of the wall mosaics that survived on the intrados surfaces of arcades between the nave and the aisles, on the under-arches of the tribelon, on the gallery arcades, and on the soffits of the windows feature a cross or a Christogram.

Crosses also appear in wall and vault mosaics decorating buildings in the Italian peninsula, although in relatively moderate numbers, limited to either a single yet prominent representation, or several images of reduced size. Large depictions of crosses occupy the apexes of domes in the Baptistery of San Giovanni in Fonte adjacent to the Basilica of St Restituta at Naples (second half of the 4th century; Croci 2019: Fig. 2 on page 66) and the Mausoleum of Galla Placidia in Ravenna (approximately 425; Rizzardi 2012: 45, 46, Fig. 18). Similarly, a large cross is the centerpiece of the semi-dome of the apse of the Basilica of Sant' Apollinare in Classe (by 549) and the Archiepiscopal Palace in the same town (494–519; Rizzardi 2012: 114, 150, Figs 94, 139). The iconographic scheme of a few smaller images of crosses can be found, for example, in the four depictions of *Hetoimasia* in the lowest register of the dome decoration in the Orthodox Baptistery in Ravenna (458–473; Rizzardi 2012: 76–77, Figs 47, 51) and in San Vitale on the lateral walls of the presbytery and the triumphal arch, where jeweled crosses carried by angels are depicted (approximately 540; Rizzardi 2012: 134, 137, Figs 116, 122, 130). In both of these cases, the depictions of the crosses are relatively small and are eclipsed by the multitude and diversity of other elements of the iconographic programs.

The imbalance of evidence concerning the monumental decoration of churches in the East and the fragmentary condition of the wall paintings from Porphyreon hampers generalizations of any kind. The number of crosses represented in Basilica Q does not find direct parallels in any of the surviving and relatively well-preserved wall decorations from Italy. Thus, bearing in mind Nilus of Sinai's epistle to Olympiodoros and the great number of depictions of crosses from Porphyreon, as well as a similar trend observed at Hagia Sophia and the Acheiropoietos Church at Thessaloniki, it is tempting to imagine that the rendering of "a thousand crosses" could have been typical of the iconographic programs of the Eastern churches.

Visions of Paradise and the multitude of God's Creation

Another distinctive characteristic of the iconographic program of the wall paintings from the basilica of Porphyreon is the abundance of fragments depicting nature. Animal representations include a peacock (*Cat. 94*), partridges (*Cat. 97*, *98*), pigeons (*Cat. 100*, *107*), possibly a pheasant (*Cat. 104*), a lamb and another hoofed animal (*Cat. 110*, *115*), and a representation of a gazelle or a hare (*Cat. 121*). Additionally, a dog, a rooster, a partridge, and a parakeet(?) are shown inside inhabited acanthus scrolls (*Cat. 170*, *171a*, *177*). The animals are represented in static poses, except for the dashing dog from the scrolls (*Cat. 170*) and a fragment depicting the hind legs of a hoofed animal (gazelle?), which might have been captured in motion (*Cat. 115*). The animals, save those populating the scrolls, are represented amongst generic plants. One fragment with a representation of plants appears to also depict the rear part of a reclining animal (*Cat. 137*). The fragments showing red flowers, fruit, and foliage complement the riches of nature depicted here. The plants being pecked on or nibbled by animals are non-specific and were probably intended to create an overall sense of landscape. A more accurate treatment is given to depictions of fruit, such as pomegranates and pears, which are easily recognizable due to their distinctive shapes (*Cat. 153–155*, *160*).

These fragmentary representations of nature cannot be pieced together into one composition because they likely come from different parts of the walls, if not from different parts of the basilica, and are too few to recreate a complete image. Nevertheless, this assemblage evokes paradisiacal landscapes populated with animals, standing or striding among different plants, that are depicted on a number of Late Antique floor mosaics from churches, chiefly dating to the late 5th and 6th centuries. One such mosaic survives in the "four-pillar chapel" (possibly a baptistery) adjacent to Basilica A at Resafa (Ulbert 1986: 100–101, Pl. 39.1) [*Fig. 6-11*]. The partly preserved mosaic shows animals standing or reclining among generic plants, fruit trees, and cypresses: we see a goat, a gazelle, another antelope, a partridge, a guineafowl, and another bird. A fragment of a presumably similar depiction comes from the sanctuary of the church at Houeidjit Halaoua (471; Donceel-Voûte 1988: 149, Fig. 121). The landscape featured a pair of rams, ducks, cranes, a phoenix, an ox, and an antelope shown among generic plants, pomegranate and pear trees, and cypresses. Furthermore, depicting the whole of animate and inanimate creation also seems to have been the goal of the commissioners of the mosaic in the ambulatory of the martyrion church at Seleucia Pieria (late 5th–third decade of the 6th century; Donceel-Voûte 1988: 290–296). The mosaic represented a procession of different species of tame animals striding among sporadically scattered trees and shrubs.

No such depictions are attested in the Late Antique wall paintings or wall mosaics. Elements of landscape and nature-derived motifs appear in a number of extant wall mosaics, chiefly from Ravenna, but they either merely act as background elements to the figural depictions or are used to frame and surround them. The largest of such representations is the paradisiacal landscape that occupies the lower half of the mosaic in the semi-dome of the apse of the Basilica of Sant' Apollinare in Classe (Rizzardi 2012: 150–151) [*Fig. 6-12*]. It constitutes the background for the figure of St Apollinaris and for the symbolic scene of Transfiguration taking place above him. The landscape consists of a green lawn dotted with stones, as well as trees, small shrubs, and red and white flowers. It is populated by birds, including partridges, doves, and parakeets, depicted

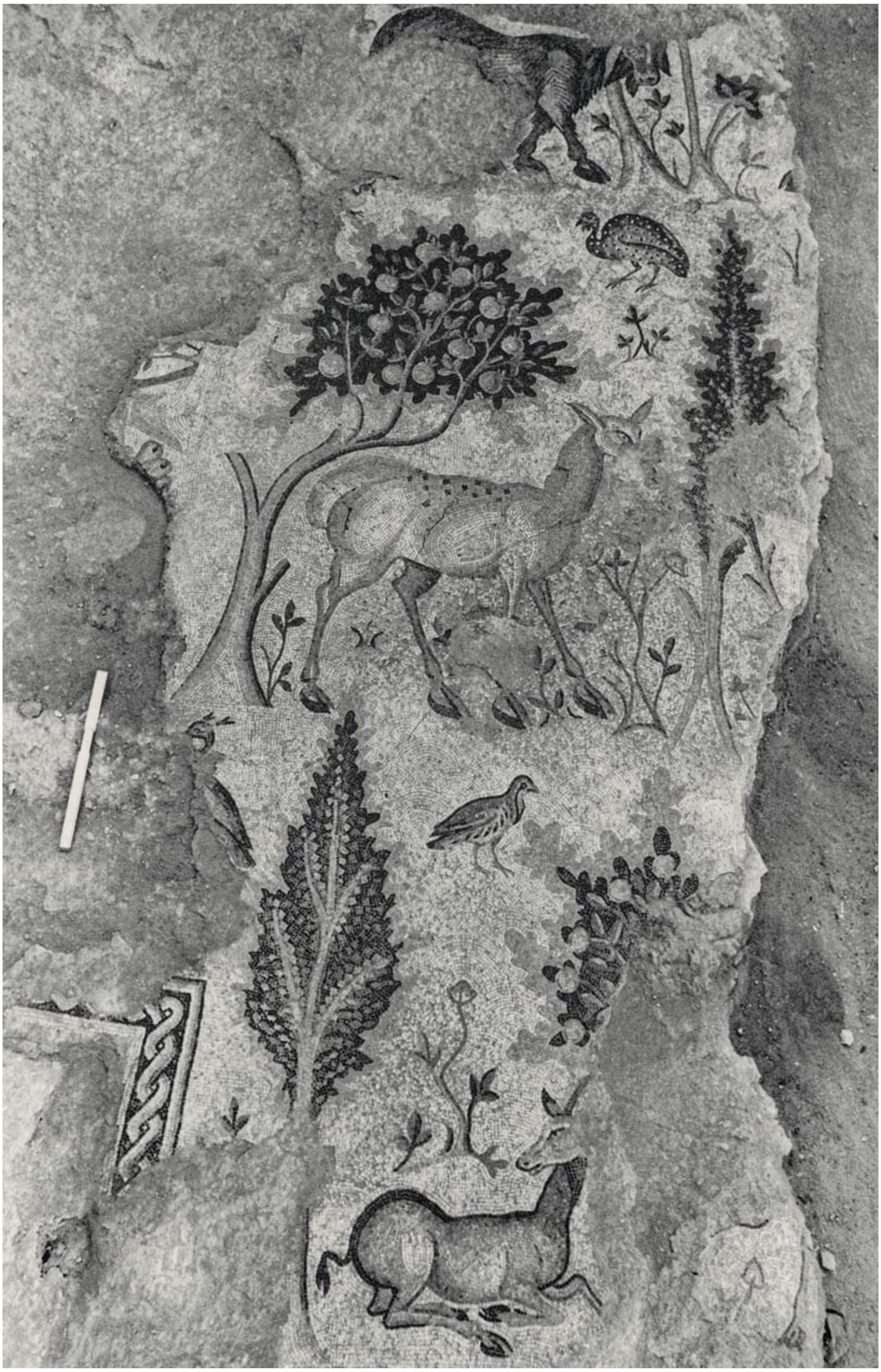


Fig. 6-11. Different animals standing, striding, and reclining among trees and generic plants; floor mosaic in the "four-pillar chapel" of Basilica A at Resafa; late 5th century



Fig. 6-12. Heavenly landscape; detail of the apse mosaic; Sant' Apollinare in Classe; 549

on the ground and in flight. The Apostles Peter, James, and John are shown in the form of white lambs, while 12 other lambs, probably symbolizing the twelve apostles, advance towards the figure of St Apollinaris.

Smaller representations of paradisiacal landscapes are featured in the decoration of the lunettes of the Mausoleum of Galla Placidia in Ravenna and the Baptistery of San Giovanni in Fonte at Naples. In both of these earlier wall mosaics, the landscape constitutes the setting for a representation of Christ as the Good Shepherd and two deer drinking from a stream, as a reference to the first verse of Psalm 41 (42). In the Mausoleum, the Good Shepherd is represented in a rocky setting with small shrubs growing in the grass and white sheep standing and reclining between the rocks. The deer are drinking from a small pond while green scrolls depicted against a dark blue background swirl around them (dated about 425; Rizzardi 2012: 48, Figs 23, 25). In Naples, space limitations necessitated the landscape to be reduced to a few shrubs with red flowers surrounding the Shepherd, two schematic rock formations, and two streams from which the deer are drinking (second half of the 4th century; Ferri 2013: Pls 8, 23–25; Croci 2019: Figs 8–11 on pp. 74–76).

Nevertheless, there are two literary sources which prove that nature as such could also be represented on church walls: the aforementioned *Letter to the Prefect Olympiodoros* by Nilus of Sinai and Choricius' descriptions of the two churches, of St Sergius and of St Stephen, at Gaza. From Nilus' epistle we learn that Olympiodoros intended to

> "fill the walls, those on the right and those on the left [of the aisles – JMB], with all kinds of animal hunts, so that one might see snares being stretched on the ground, fleeing animals, such as hares, gazelles, and others, while the hunters, eager to capture them, pursue them with their dogs; also the nets being lowered into the sea, and every kind of fish being caught and carried on shore by the hands of the fishermen."

"Pictures of different birds and beasts, reptiles and plants" were to be depicted in the nave (*Epistulae* IV, 61; quoted after Mango 1986: 32–33).

Choricius relates that in the lateral apses of the Church of St Sergius at Gaza "there grow ever-burgeoning trees full of extraordinary enchantment: there are luxurious and shady vine, and the zephyr, as it sways the clumps of grapes, murmurs sweetly and peacefully among the branches" (*LM* I, 32; quoted after Mango 1986: 62). The vines spring from a *kantharos*; a flock of partridges is depicted near it. Below the dome of the church, there were images of "pear trees, pomegranate trees and apple trees bearing splendid fruit, blossoming in all seasons alike" (*LM* I, 35; quoted after Mango 1986: 63). The lateral porticoes of the atrium of the Church of St Stephen were decorated with "vines and clear water and all kinds of plants", while on its east wall "you may see everything the sea brings forth and all the tribute of the earth: there is hardly anything you could look for that is not included, and a great deal that you would not expect to see" (*LM* II, 33, 34; quoted after Mango 1986: 68–72). Inside the church, the walls of the aisles show images of the Nile:

> "The river itself is nowhere portrayed in the way painters portray rivers, but is suggested by means of distinctive currents and symbols, as well as the meadows along its banks. Various kinds of birds that often wash in that river's streams dwell in the meadows" (*LM* II, 50, 51; quoted after Mango 1986: 69).

The depictions of landscapes, orchards, hunts, and the Nile derive directly from the Graeco-Roman artistic repertory, where they formed a picture of an ideal land or symbolized idyllic bliss. Possibly that was the notion behind Olympiodoros' iconographic program decorating the church, which involved hunting and fishing scenes and depictions of the bounty of the earth. Moreover, such decoration could easily be granted a religious meaning by reference to the renowned passage from the book of Genesis (1:28) where God commands man to "[b]e fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground".

Nilus did not see any Christian aspects in these subjects, and thus he did not consider them fit for a church. However, in Choricius' account such nature-derived motifs clearly turn into a vision of Earthly Paradise, and therefore their presence in the iconographic program of a church is not unapt or controversial to the author. Even though he does not speak explicitly of such associations or any biblical meanings of the depicted nature-derived subjects, he repeatedly uses terms and expressions evoking the sensations of a paradisiacal atmosphere, such as gentle breezes, cool water, and light (*LM* I, 22, 32; *LM* II, 29–30, 33, 51). Such a gentle climate with no succession of seasons (thus, the "ever-burgeoning trees" and the fruit trees "blossoming in all seasons alike") is a hallmark of paradise in pre-Christian and, subsequently, early Christian literature (Maguire 1987b: 25).

The concept of depicting Earthly Paradise in churches derives from and is sanctioned by several biblical texts. The first and the most important source of inspiration for such a subject are the descriptions of Creation and the Garden of Eden in the Book of Genesis (2:8–9). The act of Creation, which brought into existence the variety and the splendor of nature, was celebrated by a number of early Christian writers, especially in sermons and commentaries to the *Hexameron*, the first six days of the world (Maguire 1987b: 18–19, 25, 32–33). For example, the second Theological Oration of St Gregory of Nazianzus delivered in 380 is a single long celebration of God's magnificence revealed in the countless and wonderful forms of His Creation (*Homilia XXVIII*).

Hardly expressed by the written word, the diversity and variety of creation was a challenging subject to be depicted in the visual arts. Artists dealt with it in two principal ways: either by resorting to personifications of particular aspects of creation (e.g., personified rivers, seasons, the earth and the ocean) or by depicting a selection of creatures representative of and associated with land, sky, or sea (Maguire 1987b: 20; 2012: 14–22). The second solution seems to have been preferred on floor mosaics in churches, where various representations of animals and plants were captured in either landscapes or seascapes, or were arranged in catalog-like compositions inscribed in geometric grids. The latter compositional arrangement was employed in the basilica at Porphyreon itself. The large mosaic with the inscription of 477, the mosaic with the inscription of 565, and two of the four mosaic carpets from the aisles featured interlaced compartments filled with depictions of birds and plants [*Figs 6-13*, *6-14*]. If the variety of Creation could be displayed on the floors of churches, it seems likely that this subject could have occupied some of their walls as well.

The subject of the Garden of Eden, where God "made all kinds of trees grow out of the ground, trees that were pleasing to the eye and good for food" (Gen. 2:9), returns in apocalyptic prophecies found in the Book of Enoch (10:18–19; 24:3–4; 25:5; 32:3–6), and in the Book of Revelations (22:1–2) and the writings that followed it, such as the *Apocalypse of Peter* (15–16) and the *Apocalypse of Paul* (21–22; Kyrtatas 1998: 340–344). Connecting these visions of "the land of promise" is the recurring motif of a garden planted with fragrant plants and fruit trees that never cease to blossom and bear fruit. This is the reason for the presence of pomegranate trees,

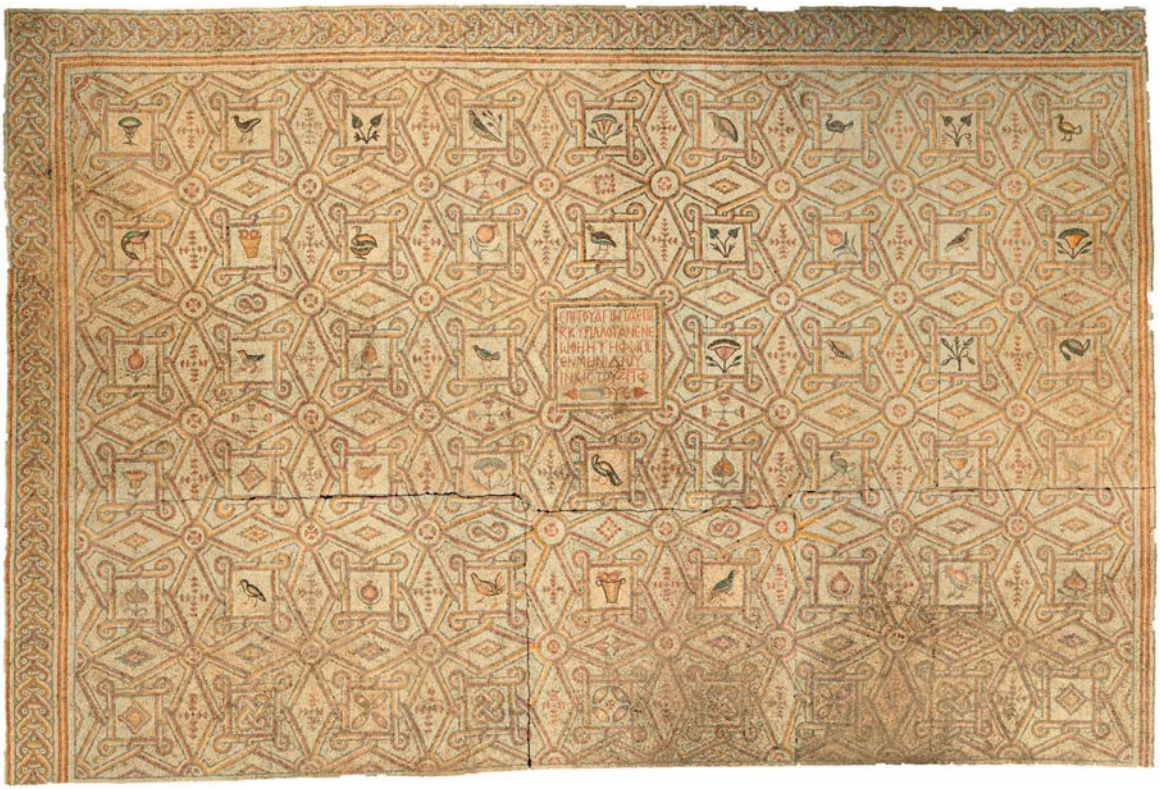


Fig. 6-13. Mosaic from Basilica Q with different birds and plants inside an interlaced geometric grid. In the middle, an inscription with the date 477; on view at the Beiteddine Museum



Fig. 6-14. Mosaic floors from Basilica Q showing, on left, different animals inside intertwined medallions (the inscription at the top commemorates the laying of the mosaic in the baptistery in 565), and on right, various birds and plants inside interlaced medallions (the mosaic most likely comes from the western end of the northern aisle); on view at the Beiteddine Museum

palm trees, and red flowers in funerary wall paintings: they stood for the hope of bliss in the afterlife. The same vegetal motifs frequently occur in wall mosaics of Late Antique Christian monuments from Thessaloniki, through Naples, to Ravenna, where they usually frame, surround, or fill the empty spaces of figural scenes.

Another prophecy justifying depictions of nature in sacred spaces was the Book of Isaiah, which delivers a vision of a Peaceful Kingdom to come at the end of days, where "[t]he cow will feed with the bear, their young will lie down together, and the lion will eat straw like the ox", "the wolf and the lamb will feed together … and dust will be the serpent's food", and the animals "will neither harm nor destroy" (Is. 11:7; 65:25).

These passages are illustrated by the motif of *philia*, friendship between animals, appearing in floor mosaics of Late Antique churches (Campbell 1995; Hachlili 2009: 204–205). These mosaics did not always feature representations of the animals mentioned by Isaiah, but generally represented species that are enemies in the earthly life, now standing peacefully among the trees (e.g., mosaic in the Church of the Lions at Umm er-Rasas/Kastron Mefa'a shows lions and gazelles, while different animals, including a bull and a lion, are depicted on the Paradise Mosaic at Madaba; Piccirillo 1997: 128, 236, Figs 139, 338). In fact, the mosaic from Porphyreon depicting two lions and two rams should probably be understood in the spirit of *philia*, although it is set in abstract space framed by the geometric design of interlaced *scuta* [see above, *Fig. 5-10*]. While it was possible to depict varying configurations of species and numbers of animals in different compositional arrangements (Talgam 2014: 219–227), the species of trees were not discretional. Four types of fruit trees recur in depictions of *philia*, including the easily identifiable pomegranates and pears, and the somewhat less distinctive and harder to recognize apples (or medlars)[5] and peaches (or apricots or quinces; Öğüş-Uzun 2010: 399–401). Sometimes all four species are depicted, while at other times only two or three. The same kinds of fruit occur in wall paintings from the basilica at Porphyreon (*Cat. 153–155*, *160*, *172*, *173a*, *174a*, *175a*).

In conclusion, paradisiacal landscapes populated with a variety of plants and animals, depicted on the floors or walls of a church, had a threefold metaphorical meaning: they were a celebration of God's Creation, a reminder of lost Eden, and a promise of the afterlife bliss in the Heavenly Kingdom. Even though there is no way of unequivocally proving it, such subjects could have decorated the walls of the basilica at Porphyreon, as suggested by the significant number of fragments of animal and plant depictions.

In addition to the visions of Earthly Paradise or visual inventories of the diversity of God's Creation, animals also appeared in representations of other subjects from the Old and New Testaments. For example, from the Northern Church at Hawarte comes a floor mosaic with a representation of Adam naming the animals (487; Donceel-Voûte 1988: 104, Fig. 71).[6] A similarly rendered depiction of David, inspired by the motif of Orpheus charming the animals, comes from a synagogue at Gaza (508–509; Hachlili 2013: 414–415). A representation of

[5] The identification with medlars was proposed by Esen Öğüş-Uzun (2010: 400), although in view of the passage from *Laudatio Marciani* I, 35, which lists apples next to pomegranates and pears, it seems more likely that the depicted fruit are apples.

[6] On the various ways of representing the subject in early Christian art see Maguire 1987a. Zacharias Rhetor in *Vita Severi* recalls seeing a wall painting of Adam and Eve expelled from Paradise in the Church of the Mother of God in Beirut/Berytus (*Vita Severi*, fol. 119r, 11). It cannot be excluded that earlier episodes from the Book of Genesis, such as images of Paradise, were depicted there as well.

various animals surrounding Noah's Ark was found in a building of undetermined function (believed to be a synagogue by some scholars) at Misis-Mopsuestia in Cilicia (late 5th century; Hachlili 2013: 403–405).

Furthermore, images of certain species of animals were necessary to depict certain stories. For example, a lamb, which is recognized in a fragmentary painted representation from Porphyreon (*Cat. 110*), could have appeared in a scene of the Annunciation to the Shepherds. We learn from Choricius that this event was included in the iconographic program of the Church of St Sergius at Gaza (*LM* I, 53, 54). However, in view of the overall scarcity of human representations in the basilica of Porphyreon, the presence of such figural scenes is rather dubious.

The multiple, "collective" representations of different creatures and plants were characteristic of visions of Paradise and images of the diversity of God's Creation. At the same time, certain types of plants and animals, such as a vine, pomegranate, peacock, or lamb, could have been depicted independently of such compositions, because they were motifs charged with symbolic meaning. The origins of such symbols are complex and may go back to Graeco-Roman art if not earlier (e.g., the peacock as a symbol of the afterlife), they may derive from the Scriptures (e.g., the motif of deer drinking from a stream as a metaphor of a soul thirsting for God, as used in the Septuagint Psalm 41), or from early Christian writings (e.g., different cosmic, terrestrial, aquatic, horticultural, and nautical phenomena and animals used as metaphors of the Virgin Mary in the *Akathistos Hymn* dated to the 5th century; Maguire 2012: 79–80). Certain animals could have also been employed to disguise people and concepts. For example, in the Basilica of Sant' Apollinare in Classe in Ravenna, the 12 lambs advancing towards the figure of St Apollinaris, represented in the lower register of the apse mosaic, symbolize the twelve apostles, while lambs emerging from the gate of Bethlehem and lambs coming out of Jerusalem represent the Church of the Gentiles and the Church of Jerusalem (Maguire 1987b: 12–13; Rizzardi 2012: 159).

Finally, representations of animals facing each other in symmetrical arrangements could have been used to flank a cross or other centerpiece depiction [see below, *§ 6.3* and *Fig. 6-19* bottom].

The wall paintings in the desert castle of Qusayr 'Amra (Vibert-Guigue and Bisheh 2007) and the floor paintings from Qasr el-Heir el-Gharbi (Schlumberger 1948) show that nature and the associations with paradise that it evoked continued to play an important role in Umayyad monumental art. Vine and acanthus scrolls (devoid of animate creatures), fruit trees, and stylized flowers are the leading motifs of the wall mosaics of the Dome of the Rock (648/5?–691/2?) and the Great Mosque at Damascus (706–714/715; Rosen-Ayalon 1989; Flood 2001: 32–35; McKenzie 2013; James 2017: 257–262). These paintings and mosaics are probably the last surviving material evidence of the important role that nature played in the monumental decorations of Late Antiquity. After the period of the iconoclasm (726–842), nature-derived subjects virtually disappeared from church interiors. This aversion toward representations of nature was a consequence of the activity of iconoclasts who, according to the historical sources, not only spared images of nature from destruction but sometimes executed them anew in place of destroyed images of holy figures.[7] Such testimony comes from Stephen the Deacon who related

[7] Leslie Brubaker and John Haldon (2011: 199–212) argue that these accusations of destruction are much exaggerated and unfounded in reality. However, even if so, it is apparent that the role of nature in post-iconoclastic art dramatically decreased and that nature-derived motifs, once ubiquitous, disappeared from church iconographies.

in the *Life of St Stephen* that the iconoclasts who scraped off or smeared with ash the images of Christ, the Virgin Mary, and the saints, preserved and honored "pictures of trees, birds or senseless beasts … satanic horse-races, hunts, theatrical and hippodrome scenes", and in other places they even replaced images of the holy figures with wall mosaics representing "trees and all kinds of birds and beasts, and certain swirls of ivy-leaves [enclosing] cranes, crows and peacocks"[8] (*Vita S. Stephani*; quoted after Mango 1986: 152–153). Similarly, the chronicle of the Continuator of Theophanes reports that at the time of Emperor Leo "holy pictures were taken down in all churches, while in their stead beasts and birds were set up and depicted" (*Theophanes Continuatus*; quoted after Mango 1986: 159). In consequence of such actions, the iconoclasts were accused of idolatry by their opponents, as they seemingly honored the images of created beings instead of honoring the Creator. Nature became a thorny matter for both sides: the iconoclasts started avoiding it in order to refute such accusations, whereas the orthodox disfavored it because they associated it with the heretics and the damages they had caused (Maguire 2012: 45–47).

The post-iconoclastic period saw the triumph of figural representations of Old and New Testament events, choirs of angels, and courts of prophets and saints in the decoration of sacred spaces. Images of nature, which so frequently graced the interiors of the pre-iconoclastic churches, were abandoned, and nature-derived symbolism declined in the visual arts. The depictions of animals or plants became rare, allowed only when the represented story explicitly required their presence; at the same time, nature-derived metaphors continued to thrive in Byzantine religious literature and poetry (Maguire 2012: 78–105, 110, 167).

The wall paintings depicting animals and plants from the basilica at Porphyreon, regardless of the specific subject or compositional arrangement, are rare relics of iconographic programs of wall paintings from a time when depictions of nature were a legitimate and generally accepted subject in sacred spaces.

Human representations?

The scarcity of human figural representations coming from the basilica at Porphyreon is surprising, but one should keep in mind that this may be a matter of preservation. Unfortunately, we cannot determine the location and a broader iconographic setting of the sole unambiguously human figure from the basilica (*Cat. 88*).

Figural representations could have decorated the semi-dome of the presbytery apse.[9] One of the probable iconographic programs would have an image of Christ as its focal point. This kind of apsidal representation survives in a number of variations in wall mosaics and is recorded in historical descriptions (Ihm 1992; Spieser 1998). Some of them display a unique and unparalleled blend of motifs, such as the apse mosaic in the church of the Latomou Monastery (Church of Hosios David; late 5th century) in Thessaloniki.[10] Other depictions, especially those dated to

[8] Apparently the inhabited scrolls motif.

[9] Another very likely location would be the spandrels of arcades of the nave and the area above them, as can be seen in the St Demetrios Church at Thessaloniki (Cormack 1969).

[10] The mosaic shows a beardless Christ holding a scroll portrayed against a round mandorla and with a rainbow behind him. The space outside the mandorla is occupied by four apocalyptic creatures, four rivers of Paradise, two

the 6th century, appear to follow one of several compositional schemes established by that time, such as the image of Christ standing or enthroned between angels, saints, and ecclesiastical personalities, including: between St John the Baptist (or Bishop Marcianus) and St Stephen (Church of St Stephen at Gaza; Choricius, *LM* II, 38, 45), between angels, St Vitalis, and Bishop Ecclesius (San Vitale; Rizzardi 2012: 140, Fig. 131; James 2017: 238, Fig. 93), and a bust of Christ hovering above saints and donors standing on the ground (Chapel of St Venantius in the Lateran Baptistery; James 2017: 283–284, Figs 108–109). The theme of the Transfiguration was introduced in the mid-6th century (Spieser 1998: 70). Examples include the apsidal centerpiece of the church in the Monastery of St Catherine in Sinai (between 548 and 565; James 2017: 223–224, Fig. 86) and the southern apse of the Southern Church at Shivta/Sobota (early 6th century?; Figueras 2006–2007).

Different types of apsidal images of the Virgin Mary became popular starting from the mid-5th century (Ihm 1992; Spieser 1998: 65, 70). Three surviving apse mosaics from churches in Cyprus featured such depictions, albeit each following a different iconographic model.[11] Just like Christ, the Virgin Mary could also be portrayed with saints, donors, and bishops at her side. According to Choricius, such a representation was set up in the apse of the Church of St Sergius in Gaza: the Virgin held the Child to her bosom, while next to her St Sergius was depicted accepting from Stephen, Governor of Palestine, a model of the church (*LM* I, 29–31). In addition, inscriptions on floor mosaics of the er-Rashidiya church and the Church of the Virgin at Madaba seem to allude to apsidal representations of the Virgin and Christ (see above, *§ 1.2.1*; Di Segni 2006; Hamarneh 2015: Figs 5–6).

Despite such an array of subjects that could be depicted in the apse of the basilica at Porphyreon, it cannot be excluded that, like in Resafa, Tur Abdin, and Lycia, a large cross was represented there instead of divine and human figures.

Friezes, frames, and geometric patterns

A set of fragments depicting an inhabited scroll formed decoration resembling a frieze (*Cat. 170*); another ran on the face of an arch (*Cat. 171a*, *172*, *173a*, *174a*, *175a*, *176a*) [see above, *Fig. 6-2*]. Decoration of this type—vine, acanthus, or ivy scrolls, often populated with various creatures and inanimate objects—was a popular motif in Graeco-Roman art, especially in the East, and subsequently, in Late Antique decoration (see above, *§ 5.7*). Inhabited scrolls could appear either as a carpet-like or band-like composition. In the first case, the scrolls develop over a broad, usually rectangular surface, such as a mosaic carpet. The second arrangement was generally used for

ambiguous elderly bearded men depicted against a rural background and possibly a personification of the rivers (5th century; Bakritzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 183–195; James 2017: 205, Fig. 80).

[11] The mosaic in the Church of Panayia Kanakaria at Lythrakomi represented the Virgin and Child in a mandorla set against a gold background (second quarter of the 6th century; Megaw and Hawkins 1977: 49–81, Pls 39–40; Michaelides 1987: 54–55, Pl. XXV: 67a). In the Church of Panayia Angeloktistos at Kiti, the mosaic shows the Virgin holding the Child, flanked by two archangels (second half of the 6th century; Michaelides 1987: 55–56, Pl. XXVI; James 2017: 226, Fig. 89). In the Church of Panayia Kyra in Livadhia the Virgin is depicted against a plain gold background, standing alone with her arms stretched out to the sides in prayer (7th century; Michaelides 1987: 56–57, Pl. XLI.71; James 2017: 227, Fig. 90).

framing (e.g., frame surrounding a mosaic carpet) or for marking and defining architectural divisions (e.g., inhabited scrolls on door jambs or friezes).

Vine or acanthus scrolls used as architectural decoration usually framed entrances or ran around the exteriors or interiors of buildings (Flood 2001: 69–73). For example, a frieze, carved in marble and once gilded, encircles the naos of Hagia Sophia in Constantinople, separating the marble revetment of the dado from the mosaics set above it (Teteriatnikov 2017: 272; *Descriptio S. Sophiae*, 647). The same decorative scheme was adopted in the Great Mosque of Damascus, where *al-karma* (the vine), no longer extant, continued along all four walls of the prayer hall, delineating the division between the marble dado and the wall mosaics; the vine was likely carved in marble and gilded (706–714/715; Flood 2001: 59, 66–67; Figs 32–33). A carved marble frieze featuring scrolls also surmounted the marble paneling of the octagonal arcades in the Dome of the Rock (648/5?–691/2?; Rosen-Ayalon 1989: 42, Fig. 27). In both Umayyad examples, the vine lacked depictions of animals. Another example of the application of a scroll motif in ecclesiastical contexts is found in Deir Za'faran, where a cornice carved in stone runs around the outside of the monastic church (6th century; Bell and Mundell Mango 1982: 70, 132–135; Pl. 189). These examples demonstrate how the scrolls motif, whether inhabited or not, was usually integrated with the architecture and served to emphasize its divisions. The wall paintings from the basilica at Porphyreon likely played a similar role: the two fragments showing a horizontal band of scrolls could have acted as a continuous frieze enclosing the interior of the basilica, while the fragments preserved on the faces of the voussoirs emphasized the curvature of an arched passage or apse.

Fragments of wall paintings with geometric patterns from the basilica also seem to have fulfilled the function of marking architectural features in the interior. They include a vertical band featuring a wavy ribbon pattern, actually preserved on the wall in the corner of the chapel adjacent to the southeastern corner of the basilica (*Cat. 76*), a "gemstone" band (*Cat. 77*), and a geometric pattern of red triangles decorating a hoodmold (*Cat. 79*).

The concept of employing geometric bands to delineate the architectural features of a building and to frame the principal elements of the iconographic program is illustrated by many surviving Late Antique wall and vault mosaics from Thessaloniki, Naples, and Ravenna among others. One of the favored motifs applied for this purpose is a jeweled band. Such bands, featuring colorful alternating oval and rectangular jewels, usually set against a red background, delineate, for example, the opening of the semi-dome of the Hosios David Church at Thessaloniki (late 5th century; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: Fig. on 186–187). That the principal role of these bands was to emphasize architectural features rather than to serve as compositional divisions between depicted scenes is well-illustrated by mosaics on the triumphal arch of Santa Maria Maggiore in Rome (432–440). The scenes, organized in four registers, are separated from one another with faint lines, hardly visible from below. Meanwhile, the outline of the arch itself, the curvature of the apse, and other architectural divisions of the presbytery are marked with jeweled borders (James 2017: Fig. 75).

The notion of emphasizing architectural features with colorful bands of geometric motifs is also echoed in the ornate frames and headpieces of illuminated manuscripts. These decorative elements often consist of one or two pairs of piers, usually columns, supporting a semicircular pediment. The origin of this scheme is architectural: the illuminations were meant to imitate



Fig. 6-15. Virgin and Child standing in an exedra-like structure supported by two pairs of columns and adorned with various geometric patterns; Rabbula Gospels (cod. Plut. I, 56), fol. 1v; 586; Biblioteca Medicea Laurenziana, Florence

framed apse-shaped niches and exedrae with semi-domes (McKenzie and Watson 2016: 83, 85–88) [*Fig. 6-15*]. The ornate decorations of these headpieces often use the same motifs as does monumental art. For example, a two-colored twisted ribbon from the headpiece of folio 4v of the Rabbula Gospels can be seen as a parallel of the two-colored twisted ribbons from the arches supporting the dome of the Mausoleum of Galla Placidia.

These examples of the application of geometric bands in monumental mural art, including the fragments from Porphyreon, demonstrate that wall decorations were integrated with the architecture not only because the architecture acted as their carrier, but also because they followed and emphasized its features. In addition, one can also imagine that carved architectural details could be substituted with a painted imitation, a concept going back to the Second Style of Roman painting. For example, a frieze with the inhabited scrolls motif could have been either executed in carving or in painting, with the latter solution likely being less labor-intensive and thus cheaper.

Another iconographic motif found among the paintings from Porphyreon—which seems to be closely associated with a particular architectural feature and derives from painted imitations of architectural details—is the floral grid on the intrados of the arch, which bore on its face a depiction of inhabited scrolls (*Cat. 171b*, *173b*, *174b*, *175b*, *176b*). The origins of this motif also go back to the Second Style of Roman painting, where the application of coffers executed in stucco became a common feature of vault decoration and was soon to be followed by their painted imitations or decorations combining stucco with painting (Ling 1991: 42–45, Figs 42–43). The coffers would be filled with various floral, animalistic, or inanimate motifs, although the flower rosettes were among the prevailing motifs, possibly due to their relative simplicity of form and execution.

The initial pictorial renderings of coffered ceilings made use of shading to create a three-dimensional appearance of the coffers and the motifs within them. Later, however, this illusionism gave way to a more abstract and schematic treatment of the subject which subsequently evolved into more or less complex overall grids filled with repeated geometric and floral motifs (Ling 1991: 65, 86, 189). In the East, examples of such painted grids of octagons, hexagons, and squares can be found on the vaulted and flat ceilings of Late Roman tombs (Barbet 1995; see *Table 5-1:191–192*). Grid decorations filled with repetitive motifs continued to be popular on Late Antique vault mosaics, as attested in the Rotunda of Thessaloniki (late 4th century; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 56, Fig. 15), Hagia Sophia (532–537 and 558–562/563; Teteriatnikov 2017: 82–84, 107–109, Figs 85–89, 123–124), and vault mosaics from the Italian peninsula [see *Table 5-1:193–194*]. The floral grid surviving on the five fragments of the intrados surfaces of voussoirs (*Cat. 171b*, *173b*, *174b*, *175b*, *176b*) testifies that the same decorative concept was employed in the basilica at Porphyreon.

6.2.3 Overall decoration of the basilica

The basilica of Porphyreon was decorated with two other types of artistic media beside wall paintings, namely, floor mosaics and marble revetment, giving a unique opportunity of considering its overall decoration, a rare privilege in Late Antique churches where usually only floor mosaics survive.

Walls

Paintings were the principal decorative medium used to decorate the walls. However, a study by Mariusz Gwiazda (2015) demonstrated that the east wall of the presbytery was reveted with marble. Even though the revetment has not survived, the presence and distribution of holes for holding clamps and a number of broken fragments of marble found in the debris, testify to its presence in the past [*Fig. 6-16*].

Another matter to consider is whether there could have been a wall mosaic in the basilica of Porphyreon. With the lower parts of the east presbytery wall faced with marble and the paintings rising above that, the only place for such a medium is the semi-dome of the apse. The arguments in favor of the presence of a wall mosaic are provided by comparanda from other Late Antique churches. Wall mosaics are attested in nearly all of the churches with at least some parts of their walls rendered in marble; their presence is marked usually by great numbers of glass tesserae found in the debris (Burdajewicz 2020b). During the clearing of the basilica carried out by the PCMA-DGA expedition in 2004, about 30 cobalt, blue, green, black, yellow, and transparent glass cubes were recovered (Waliszewski et al. 2008: 35). It is possible that the glass tesserae were much more numerous, but were collected or discarded during the first excavations of the basilica in 1987.

Marrying wall mosaics to marble revetment was a hallmark of imperial foundations. Procopius and Paulus Silentiarius report the use of these media in the interior of Justinian's Hagia Sophia (*On Buildings* I, 1.54–61; *Descriptio S. Sophiae*, 647–720). Procopius further tells of the ceiling in the vestibule of the imperial palace in Constantinople featuring mosaics depicting Justinian's

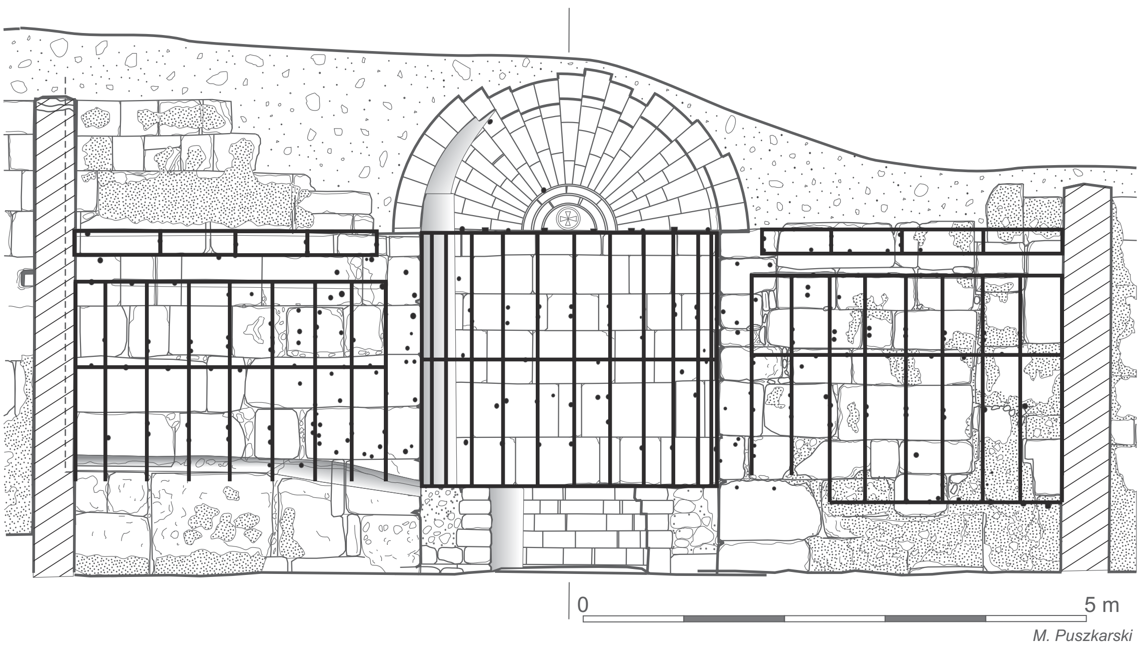


Fig. 6-16. Reconstruction of the layout of marble wall revetment on the east wall of the basilica based on distribution of clamp holes

victories, while marble panels lined "the whole interior up to the mosaic of the ceiling … not only the upright surfaces but the entire floor as well" (I, 1.15–20; quoted after Downey and Dewing 1914). Examples of a coupling of these two techniques are known from the Mar Gabriel Monastery at Kartmin (Hawkins, Mundell, and Mango 1973) and of the Monastery of St Catherine in Sinai (James 2017: Fig. 86), the former being Anastasius' foundation and the latter Justinian's.

However, wall mosaics and marble were not reserved for imperial foundations. They appeared also in churches constructed and decorated by bishops and local personages following the imperial example to manifest their generosity, power, and piety. Choricius attests the use of marble revetment and wall mosaics in two churches in Gaza (*LM* I, 17–76; II, 28–54); they were present in cathedral churches, for example, at Hippos-Sussita (Epstein 1993: 635), and Jerash/Gerasa (Michel 2001: 233; Hamarneh 2015), but also in churches of unknown status or dedication, such as the Round Church at Beth Shean/Scythopolis (Fitzgerald 1931: 22–23), the Western Church at Pella (Smith 1973: 140–142), and the church at el-Tuweiri (Smithline 2007). The same combination of media was adopted later in the decoration of Umayyad monuments, such as the Dome of the Rock and the Great Mosque of Damascus. Considering these parallels, the presence of a wall mosaic in the semi-dome of the apse, above the marble lining of the east wall of the presbytery of Basilica Q, appears likely. Also supporting this hypothesis is a small patch of mortar surviving in the semi-dome. It has a different character than the plaster used as a substrate for the wall paintings, the texture resembling imprints of tesserae [***Fig. 6-17***].

The interior walls of the basilica at Porphyreon that were not faced with marble revetment were plastered and painted. It is unknown at what height the painted decoration began. It seems logical though that the more significant subjects (e.g., depictions of crosses) were placed in the upper registers of the walls in order to protect them from wear and accidental damage. Such a



Fig. 6-17. Remains of mortar in the semi-dome of the apse with texture resembling imprints of tesserae

practical solution was adopted in the North-West Church at Hippos-Sussita, where painted decoration occupied only the upper parts of the walls, while the lower parts were left plain white (Burdajewicz 2017: 171). Similarly, at Deir 'Ain Abata, where numerous fragments of painted plaster were found in the debris, the still extant plaster in the lowermost registers of the walls is plain.[12] Alternatively, the lower parts of the walls at Porphyreon could have been filled with simple designs without special iconographic meaning. If worn or damaged, they would not have disrupted the overall iconographic program of the basilica.

Even though there is no surviving evidence of painted decoration in the lower registers of the walls of the basilica in Porphyreon, two possible decorative schemes can be entertained. One is that they could have been painted in imitation of marble panels. A number of high-class monuments, such as the presbytery of Justinian's church in Sinai, the monastic Church of Mar Gabriel at Kartmin, the Basilica of the Sant' Apollinare in Classe, the San Vitale, the Dome of the Rock, and the Great Mosque of Damascus, have or had the lowermost register of the walls lined with marble, the wall mosaics beginning at a certain height, well out of reach of a standing person and hence protected from damage. However, a painted imitation of marble was made in the less prominent buildings, where marble was beyond the financial capacity of the patrons, following in this the example of Roman-period monuments (Ling 1991: 95, 192). An excellent example of painted imitations of marble occupying the lower register of the wall with figural scenes painted above them appears on the west wall of the church at Karm al-Ahbariya in the vicinity of Alexandria (6th century; Witte-Orr 2010: Fig. 28). Other Late Antique parallels include the "two-story chapel" of Basilica A at Resafa (6th century; Ulbert 1986: 92–93, Fig. 57, Pl. 36.2), and the Santa Maria Antiqua in Rome (first decade of the 7th century; Bordi 2016b: 43, Fig. 6).

The other possibility are painted imitations of wall hangings, a decorative formula of Graeco-Roman origin, although less common in Roman wall painting than the pictorial imitations of marble revetment. An early example can be found in the Republican Sanctuary in Brescia, where an illusionistic depiction of an ivory-white wall hanging decorated with red geometric patterns and green garlands with ribbons occupies the lowermost register of the walls (Cavagnino 2011). Painted imitations of wall hangings become slightly more popular in early Christian monumental art, although the surviving examples are geographically scattered. An early pictorial representation of a wall hanging comes from the St Gennaro Catacombs at Naples (4th century?; Felle 2000: Pl. X.a). In Rome, the lowermost register of the walls of the Oratory of the Forty Martyrs adjacent to the Santa Maria Antiqua Church on the Forum Romanum retains fragments of wall paintings representing a yellow textile pinned to the walls (Bordi 2016a: 282, Fig. 6). While this particular painting is dated roughly to the early 8th century, the wall decoration of the Oratory and of the Santa Maria Antiqua Church continued to employ this motif for three subsequent centuries (Bordi 2016a: 283–286). Patches of plaster featuring a depiction of a wall hanging with fringes were found in the apse of a church at ed-Deir (Ma'in; Piccirillo and Russan 1976: 61, Pl. XXIV, 1). Moving to Egypt, painted imitations of textiles or motifs that are direct quotations from textiles appear in wall decorations from Saqqara (Rassart-Debergh 1981: 22, 50, Figs 4, 19, 28ab, Pls III–IV) and in the Red Monastery near Sohag (Bolman 2016a).

[12] Author's observations from a study of execution technique of the painted wall plasters from Deir 'Ain Abata (unpublished).

Illusionistic depictions of wall hangings presumably reflect the practical solution of pinning real textiles to the lowermost parts of walls for decoration, but also to cushion the wall surfaces from accidental mechanical damage. The practice of hanging textiles from *al-karma* (a carved frieze with vine decoration) in order to cover the marble dado was recorded in the Great Mosque of Damascus (Flood 2001: 66). Painting an imitation of such a hanging is a smart way of decorating the space below the upper registers of walls, where the proper iconographic program would have been placed.

It is a pity that there is no way now to ascertain whether the painters who decorated the basilica at Porphyreon chose to leave the lower parts of the walls plain, imitated marble revetment or wall hanging in painting, or resorted to completely different decorative devices.

Floors

The principal decorative medium of the floors were *opus tessellatum* mosaics. However, Gwiazda in his study of the marble revetment of the basilica also found evidence of an *opus sectile* pavement, specifically a handful of fragments of rounded and triangular marble tiles (Gwiazda 2015: 127, Fig. 1). Modest quantities recovered by the PCMA-DGA expedition from layers mixed with modern debris, like the glass tesserae, suggest that they had been removed during the exploration of the basilica in 1987. Lacking documentation from that time, we are deprived of any information on the size, design, or even the location of the *opus sectile* pavement.

Combining marble paving with marble revetment of the walls, confirmed in Porphyreon, is a decorative scheme common in early Christian churches in the East. For example, marble lined the walls and paved the floor of the presbytery and the nave of the Civic Complex Church at Pella (Smith and Day 1989: 40–44); a similar scheme was adopted in the Cathedral of Jerash/Gerasa (Michel 2001: 233), while at Hippos-Sussita marble once covered the whole area of the floors and the east wall of the cathedral (Epstein 1993: 635). An *opus sectile* pavement was coupled with marble paneling (no longer extant) in the Church of Mar Gabriel at Kartmin (Hawkins, Mundell, and Mango 1973: 282).

Nevertheless, the high cost of marble meant that not all patrons could afford to adorn vast surfaces of walls and floors with this material. Faced with a low budget, marble would be used to underscore the nave or the most important part of the church, that is, the sanctuary. One observes this, for example, in a number of churches at Gerasa where marble pavement appears only in the presbyteries of the churches while the nave and the aisles are tessellated (see Michel 2001: 226–267). It is therefore possible that an *opus sectile* pavement adorned the presbytery of the basilica at Porphyreon. It would have been rather small, however, and confined to the apse, as the major part of the floor in the presbytery was tessellated [see above, *Fig. 2-13*].

The evidence of different types of monumental decoration employed in the basilica of Porphyreon conjures up a picture of an interior decorated predominantly with floor mosaics and wall paintings, but also featuring a limited use of the more “refined” and pricey media, namely marble revetment, *opus sectile*, and, possibly, a wall mosaic in the semi-dome of the apse.

Iconographic relations between walls and floors

The mosaics excavated by Nahas in 1987 cover less than 20% of the floor surface in the basilica, hence a major part of their decorative program is lost to research. Nevertheless, a couple of points can be made regarding the iconographic dialog between the wall paintings and the extant mosaics.

First are the depictions of nature. The aisle mosaic and the large carpet retrieved from the western end of the basilica feature networks of interlaced circles, hexagons, and squares, each containing a depiction of a bird or a plant [see above, *Figs 6-13*, *6-14* right]. Interlaced circles with images of beasts and birds also appear on a panel accompanying one of the inscriptions [see *Fig. 6-14* left]. As noted above, such a catalog-like display of animals and plants was among the devices used by artists to represent the bounty of creation. In addition, the mosaic with lions and rams from the presbytery could have possibly alluded to the notion of the Peaceful Kingdom to come. Such an iconographic program of the floor decoration could have been chosen in correspondence with depictions of nature appearing on the walls.

Second, a similar repertoire of geometric patterns is apparent in both the floor and the wall decoration of Basilica Q. The wavy ribbon and cable patterns are ubiquitous in Late Antique floor mosaics and have already been attested in wall painting, but the "gemstone" band is of particular interest due to its rarity. Its appearance on the mosaic with lions and rams and in wall paintings (*Cat. 77*, *78*) points to a common source of inspiration (or mutual inspiration) of the mosaicists and painters working in the basilica.

6.2.4 Locations of motifs in the houses

Determining the exact setting of particular representations inside the residential complexes poses the same difficulties as in the case of the basilica. It can be argued though that the polychrome depictions seem to come from the upper floor of the buildings. Photographic documentation from the excavations directed by Saidah, showing the walls plastered with plain plaster, and the subsequent research carried out by the PCMA-DGA in the ground-level rooms yielded no evidence of wall paintings save for three depictions of simple red crosses and inscriptions (*Cat. 1*, *187*, *188*). Thus, the ashlars retaining painted plaster must have fallen from the upper floors of the houses. In addition, during Saidah's excavations, when the walls were still preserved to a considerable height (up to 5 m, according to the excavator), remains of colorful tesserae adhering to their bedding were noted on a level corresponding to the upper-story floors (Saidah 1977: 40). During the most recent works by the PCMA-DGA expedition, a mosaic with a depiction of a lion was found on the upper floor of a house in Sector E (Gwiazda and Waliszewski 2014: 44, 51–52, Fig. 12). These findings, along with the large number of colorful wall paintings depicting various subjects preserved on ashlars fallen from the upper parts of the buildings, conjure up a picture of a decorated *piano nobile* and austere ground-level rooms fitted only with crosses and religious inscriptions in transitional spaces.[13]

[13] A similar arrangement was observed in Umayyad housing at Pella where decorated living rooms were located on the upper floor, whereas the ground-level floor provided workshop space and stabling facilities for animals (Walmsley 2008). Also in Jerash/Gerasa, fragments of wall paintings and stuccowork fallen from an upper floor seem to indicate its more representational status (Lichtenberger et al. 2016: 331–332). On *piano nobile* in Late Antique domestic architecture see Ellis 2008: 14–15.

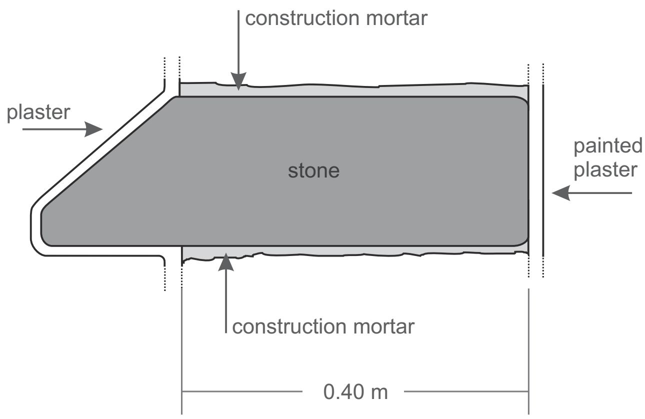


Fig. 6-18. Profile of a "corbel" element

Only a few masonry members from the residential district were dressed or plastered in a way that could shed some light on their architectural setting. The rarity of blocks dressed to a shape that would betray a specific location in a wall may be explained in part by the fact that the houses were constructed chiefly of fieldstones and reused broken ashlars (see above, *§ 3.3*). Only *Cat. 31acd* and *Cat. 229* are dressed to a specific shape. These are corbel-like blocks with the cross-section in the form of a long, flattened trapezoid [*Fig. 6-18*]. The triangular profile and the vertical surface across from it were plastered. The plaster assumes an upright, vertical direction right where the profile ends. The top and bottom surfaces of the stone elements are covered with thick layers of construction mortar which in some places retains imprints of other masonry members. Altogether ten such "corbels" have been found in the backfill of Saidah's excavations (Gwiazda and Waliszewski 2014: 48), but only the four elements presented here retain painted plaster. Initially, these masonry members were, understandably, interpreted as load-bearing elements of ceiling construction, thus assuming that the oblique surface of the profile faces downwards. However, the orientation of the painting composed of *Cat. 31acd* confirms that the oblique surface of the triangular profile was, in fact, oriented upwards [*Fig. 6-19*]. The positioning of these elements in this way excludes their employment as corbels and may indicate secondary use. Perhaps they served as a simple cornice projecting from the wall.

One other set of fragments of paintings from the houses can be anchored in a broader architectural context, namely, *Cat. 151* and *Cat. 152*. They depict foliage with red flowers or fruit set amongst it [*Fig. 6-20*]. *Cat. 151* shows an unidentified shape at the upper edge of the surviving plaster, possibly a bird, while *Cat. 152* retains a part of what appears to be a ground strip. Both fragments have plaster folded over and continuing on one of their sides (left and right, respectively). Just like the pair of partridges from the basilica (*Cat. 97*, *98*) and the two crosses from residential Complex 8 (*Cat. 187*, *188*), they flanked some sort of opening in a wall. *Cat. 258* and *Cat. 272* were also located at a wall corner, as both have one lateral surface plastered. However, the type of decoration on these fragments cannot be determined. Two ashlars, *Cat. 34* and *Cat. 211*, were plastered on two opposite sides. Two other fragments have plaster both on the face and on one of the sides, but the plaster on the lateral surface belongs to an earlier phase of use of the stone (*Cat. 24* and *Cat. 108*; for reuse of masonry elements in the residential district see above, *§ 2.4.4*). In the basilica, on the contrary, none of the ashlars and stones bear remains of such older plastering.

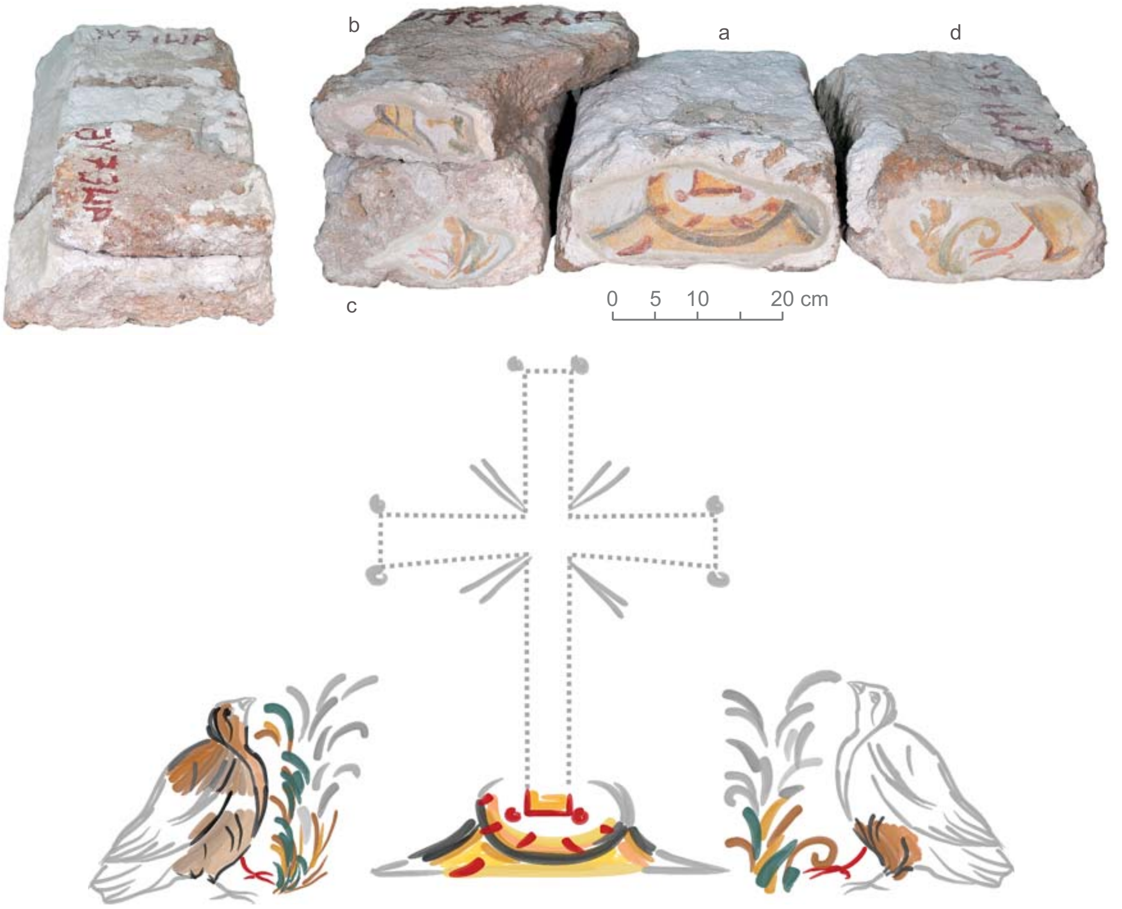


Fig. 6-19. Three "corbel" elements (*Cat. 31acd*): top, in lateral and frontal view; bottom, hypothetical reconstruction of the depiction: two partridges flanking a cross set upon a decorative base



Fig. 6-20. Depictions of foliage with flowers or fruit, framing an opening in a wall (*Cat. 151* and *152*); plastered lateral surfaces indicated with arrows

6.2.5 Iconographic program of wall paintings from the houses

Fragments of wall paintings coming from the residential district of Porphyreon display a similar iconographic repertoire as those from the basilica. The motifs include representations of simple red crosses, jeweled crosses with or without medallions, depictions of animals and plants, inhabited scrolls, human figures, painted inscriptions, red linear genre(?) scenes, and simple geometric motifs. Similarly to the basilica, the images of crosses and nature (animals, vegetal motifs, and inhabited scrolls) predominate. The two main differences compared to the basilica set are the red linear genre(?) scenes and a definitely larger number of identifiable fragments of human representations coming from the houses [*Table 6-2*].

Table 6-2. Types and numbers of representations coming from the residential district

Type of representation (following iconographic categories adopted in Chapter 5)	Catalog	Number of individual representations	Number of fragments
Simple red crosses	*1–7, 10–12, 15–17, 23–29*	20	20
Jeweled crosses and fragments of medallions	*31–35, 37–41, 46, 47, 50–52, 55–58, 61–65, 67, 69, 70, 75*	28	33
Geometric motifs	*80, 83*	2	4
Human figures	*84–87, 89, 90*	6	6
Animals	*95, 96, 99, 101–103, 105, 106, 108, 109, 111–114, 116–120, 123*(?)	20	20
Vegetal motifs	*130, 134–136, 139, 142, 147, 151, 152, 156–159, 161, 163–167*	19	19
Inhabited scrolls	*169*	1	2
Cursory, red genre(?) scenes	*179–186*	8	8
Painted inscriptions	*187–193, 195, 201, 205, 209–212*	14	16

Protection against evil forces

From the residential district come numerous depictions of crosses in various forms and dimensions. Some of them are simple, accompanied only by the letters *alpha* and *omega*, while others are placed inside decorative medallions. The only decorative scheme involving crosses, which occurs in the houses but was not attested in the basilica, is that of crosses adored by birds (*Cat. 10*, *31*, *33*; possibly also *Cat. 99*, *105*, *106*, *108*).

Rendering the sign of the cross in houses or placing it on personal objects is not attested prior to the mid-4th century (Jensen 2017: 44, 49). This practice seems to have begun with the *staurophanies* of Constantine, who not only fought and defeated Maxentius under the sign of the cross but also, according to Eusebius, continued to use it "for protection against every opposing and hostile force" (*Vita Constantini*, I, 31; quoted after Cameron and Hall 1999: 82).

From then on, the cross assumed an apotropaic function.[14] Executed on walls of dwellings or placed on personal objects, it protected the inhabitants and the proprietors against evil and, at the same time, identified them as those who will participate in Christ's victory over death. The practice of manifesting faith through the sign of the cross was encouraged by St John Chrysostom (approximately 349–407) who wrote of it "both on house, and walls, and windows, and upon our forehead, and upon our mind, we inscribe it with much care. For of the salvation wrought for us, and of our common freedom, and of the goodness of our Lord, this is the sign" (*Homiliae in Evangelium Matthaei*, LIV, quoted after Prevost 2017: 107), or elsewhere, "Anyone can see a whole chorus of these signs of the cross in houses, in market places, in the deserts, on the roadsides … on garments, on weapons, in bridal chambers, in banquet halls, on vases of gold, on gems, on wall paintings …" (*Contra Iudaeos et gentiles*, IX, 9; quoted after Schatkin and Harkins 1985: 227). Indeed, there are countless examples of Late Antique monuments and objects bearing the sign of a cross.[15]

In the realm of wall paintings, an early example of a cross depicted in a domestic setting, albeit very distant from the Eastern Mediterranean coast, comes from Lullingstone in Kent. One of the rooms of a 4th-century villa was adorned with a large Christogram placed inside a stylized medallion, which appears to be a combination of a wreath and geometric pattern resembling jewels (Meates 1987). Less distant from Porphyreon is a settlement in the vicinity of Abu Mena in Egypt, where one of the investigated houses had its walls decorated with an alternating sequence of geometric patterns and crosses, separated by painted imitations of columns (4th–6th century; Müller-Wiener and Grossmann 1967: 465; regrettably, the crosses are not illustrated). Fragments of plaster with a small cross and Greek letters rendered in red were also found in early Islamic contexts in one of the houses at Tall Jawa, plausibly in its reception room (Johnson 2010a: 358–360, Fig. 11.1:3; 2010b). They were accompanied by plaster fragments featuring geometric motifs in red, orange, yellow, brown, and black.

Numerous fragments of Greek inscriptions and a cross painted red on white plaster were found in the West Acropolis Mansion at Tell Madaba (mid-6th to mid-8th century; Foran 2007, 116, 118, Fig. 4.7–9). Three other examples of painted representations of crosses in secular yet non-domestic rooms come from Ephesus: two tabernae of Terrace House 1 with representations of birds adoring crosses (5th/6th century; Zimmermann 2010: 629–630, Figs 12–13), and one of the rooms of Insula M01 with a simple, red, Latin cross painted on the east wall (first half of the 5th century; Zimmermann 2010: 631, Fig. 14). The latter belongs to a complex that has been interpreted as a diaconia (Boulasikis and Taeuber 2008).

As said earlier, the ground-level rooms of the houses at Porphyreon were decorated with nothing but depictions of simple red crosses and painted inscriptions, while all other motifs, such as crosses in medallions, animals, human figures, and so forth, graced the upper floors of the buildings. This is true also of Complex 8, which stands out among other dwellings due to its slightly larger dimensions [see above, *Fig. 2-14*], a simple yet more refined mosaic floor in room D12, and the discovery of liturgical objects, also in room D12. This austerity of the ground-level rooms, which likely took on the semi-public role of reception rooms, points to an important

[14] On the apotropaic function of the victorious cross (accompanied by the formula IC XC NIKA), see, for example, Walter 1997.

[15] See Niewöhner 2020, for example; on Christograms on lamps, see Goodson 2017; on cross graffiti as a means to Christianize the classical city, as well as further references concerning the sign of the cross see Jacobs 2017.

change that had occurred in the decoration of domestic interiors since the Roman period. In a Roman house, the complexity and quality of wall and floor decorations would be graded according to the importance of the space they decorated. The major spaces where social interactions would take place, such as the atrium, the peristyles, *oeci*, and *triclinia* would be decorated in the most refined way. The private rooms of the proprietors, as well as other private spaces and rooms of lesser importance received less elaborate treatment (Ling 1991: 2, 175, 219–220). Furthermore, the principal rooms of the house would occupy the ground level, while the less important quarters were often located on the upper floor. In Porphyreon, this scheme appears to have been reversed to a certain degree. The decoration of the ground-level rooms was used to manifest the proprietors' faith rather than impress visitors with its artistry or a rich repertoire of subjects. In fact, its simplicity and austerity indicate that the principal role of these paintings was to convey a message, not to embellish. Meanwhile, the rooms of the upper floors, possibly accessible only to the inhabitants, housed a more colorful and elaborate decoration, featuring not only depictions of crosses but a variety of other motifs.

Regardless of its form (simple or jeweled), the sign of the cross was used extensively by the community of Porphyreon to express their faith, to manifest the triumph of Christ, and as an apotropaic symbol to ward off evil from the dwellings. The message this sign conveyed was supplemented in some cases by painted texts excerpted from the Psalms and invocations to God (see below, *§ 6.2.6*).

Religious figural painting

A similar apotropaic and intercessory role could have been assumed by the representations of saints and orantes. From the residential district come four fragments of paintings that have an explicitly religious character, namely an imago clipeata with a haloed, bearded man (*Cat. 84*), two depictions of orantes, including one ascetic-looking elderly man and a person wearing ornate clothes (*Cat. 85*, *86*), as well as a depiction of a young, haloed man (*Cat. 87*).

Representing holy personages inside houses, either as icons or as wall paintings, could have been more popular in Late Antiquity than suggested by the scarcity of archaeological evidence. Two historical sources dating to the 4th century speak of images of holy figures present in houses, although they do not specify the technique in which they were executed. One such account comes from St John Chrysostom (344–407), who reports that some people represented Meletius, the Bishop of Antioch (360–381) on the walls of their rooms (*Homilia in Meletium*). Meanwhile, his contemporary, Epiphanius of Salamis, a native of southern Palestine (d. about 403), expressed his disfavor for the practice of depicting images of Christ, the prophets and the apostles on the walls and curtains of churches and houses (*Epistula*).[16] Two other historical sources speak of large-scale representations of holy figures in domestic contexts. The first, written in the 6th century by Eustratius Presbyter, is the story of a miraculous healing performed by Eutychius, Patriarch of Constantinople while he was in exile at Amaseia in Pontus (*Vita S. Eutychii*, 53). A wall mosaicist was suffering from an inflamed hand, which had been struck by a demon as the man was removing

[16] Epiphanius' criticism of depicting holy persons has been questioned as his original writings (Brubaker and Haldon 2011: 44–50). Nevertheless, even if the passages on images are indeed a later addition, they still testify to the presence of such images in houses and churches.

a wall mosaic representing Aphrodite in the house of a certain Chrysaphius. The interesting point of this story is that the proprietor needed to replace the existing mosaic decoration with appropriate Christian images because he intended to turn the room into a chapel devoted to the Archangel Michael and a lower story of the house into a chapel devoted to the Virgin Mary. Thus, the iconographic program of the two chapels can be imagined to include representations of the archangel and the Virgin. In addition, we learn from Eustratius that the craftsman, grateful for being healed, depicted Eutychius in one of these newly-arranged chapels. The other text conveying information on wall painting representations of saints in a regular house is a collection of miracle stories written in the 6th or 7th century, *Miracula SS. Cosmae et Damiani*. Miracle 15 tells of a woman who had the Saints Cosmas and Damian depicted on the walls of her house. When she fell ill, she scraped some plaster from their images, mixed it with water which she drank, and was immediately healed.

The first of these textual sources speaks of converting secular rooms into chapels, a notion going back to the house-church at Dura-Europos (Peppard 2016: 16) and attested in Megiddo (Tepper and Di Segni 2006) and Capernaum (Corbo 1975: 59–106). However, while these three places were of public or semi-public character, including St Peter's House in Capernaum, which became a pilgrim destination, the story of the wall mosaicist appears to take place in a private house and reflects a habit of organizing small, private sanctuaries (Fugger 2017). The second text does not specify whether the painting of the two saints was executed in a dedicated cultic room inside the house. Therefore, the question to consider is whether the religious figural depictions from Porphyreon should be associated with small private chapels and special cultic rooms or whether they could have also decorated rooms intended for everyday activities.

There is strong evidence of exchange of iconographic motifs between wall paintings and domestic textiles, including representations of religious figural subjects on curtains and wall hangings. For example, the fragment of a wall hanging with two orantes from the collection of Katoen Natie presents a good parallel for *Cat. 86* from Porphyreon (Tsourinaki 2007: Fig. 23.5; Verhecken-Lammens 2009: 138, Fig. 10). The spectacular wall hanging with an enthroned Virgin Mary and Child from the Cleveland Museum of Art (Schrenk 2009: 149, Fig. 2) finds a counterpart in a wall painting decorating the court of a house on Kom el-Dikka in Alexandria (for the latter see below). Just as the textiles would borrow subjects from wall paintings, so the wall paintings could mimic textiles at times, as in Capernaum where the painted decoration—according to the reconstruction proposed by the excavators—represented a wall hanging with floral motifs and vignettes of cities (Testa 1972: 13–48; Corbo 1975: 66–70). Also, the wall paintings in Egyptian monasteries at Bawit (Clédat 1904: Pls XXII–XXIV) and Saqqara show strong affinity with textile designs (Rassart-Debergh 1981). Apart from their decorative appeal and religious contents, curtains and wall hangings had first and foremost the utilitarian function of insulating walls and screening off doorways and entrances (Schrenk 2009: 147). Therefore, if a religious image could be placed in a house doorway (a common practice to judge by Epiphanius' criticism in the *Letter to the Emperor Theodosius*), it is also possible that wall painting representations of such subjects could decorate areas of everyday domestic activities, and not only special cultic rooms.

Such a fusion of the sacred and profane is well illustrated by a wall painting decorating the court of residential Complex D on the site of Kom el-Dikka in Egyptian Alexandria (Rodziewicz 1984: 195–208, Figs 228, 236). Besides the figural fragments from Porphyreon, it is the only

material evidence hitherto discovered of the presence of Christian figural images in Late Antique houses in the East. The two-story complex consisted of two series of rooms arranged on either side of a long court and was likely inhabited by ordinary people working as craftsmen. The fragmentarily preserved painting, dated to the first half of the 6th century, represented a nearly life-sized enthroned Virgin and Child accompanied by an archangel and perhaps by a supplicant depicted in smaller scale [*Fig. 6-21*].[17] The central location of the painting within the complex and fragments of iron hooks, possibly used to hang lamps in front of the image, led the excavator to believe that the inhabitants used the courtyard for communal prayer and religious ceremonies (Rodziewicz 1984: 332). Nevertheless, even if such religious activities took place on holidays or other occasions, on ordinary days the court was a setting for domestic chores and possibly food or artisanal production, carried out in front of the Virgin Mary.[18]

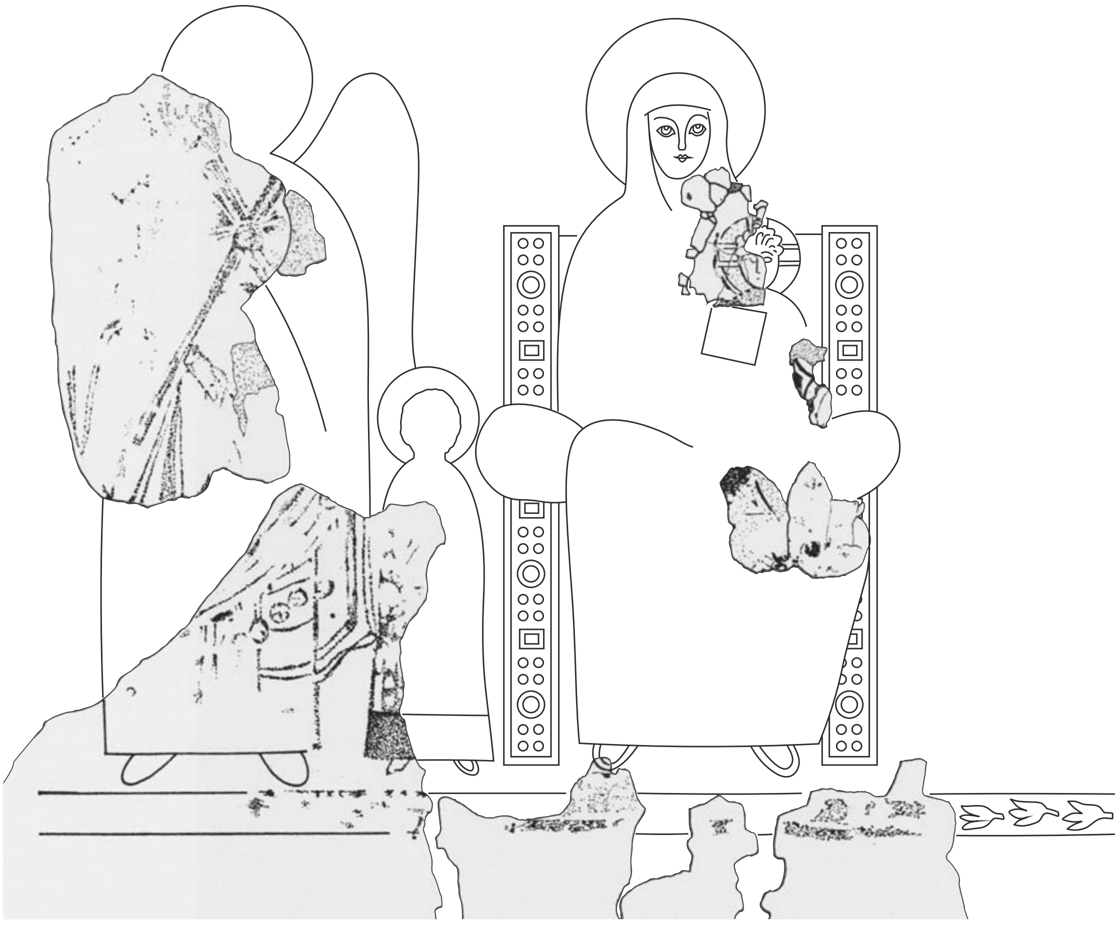


Fig. 6-21. Enthroned Virgin and Child, an archangel, and a supplicant(?); wall painting (tracing); residential Complex D on Kom el-Dikka, Alexandria; first half of the 6th century

[17] In addition, one ashlar found in the complex, possibly in secondary use, retained plaster with a fragmentary depiction of an orans (Rodziewicz 1984: 206, Fig. 237).

[18] On integrating spirituality in the workplace as illustrated by the iconography of the professional tools of scribes and weavers from Late Antique Egypt see Hanna 2018.

The religious figural wall paintings from Porphyreon might or might not have been associated with rooms arranged specifically for worship. Whatever the case, they were doubtlessly intended to evoke the presence of the saints, and thus to ensure their protection over the inhabitants and their dwellings.

Earthly Paradise

The number of different representations of nature (animals, plants, inhabited scrolls) from the residential district at Porphyreon almost equals the number of depictions of crosses, similarly as in the set of wall paintings from the basilica. Among them are images of peacocks (*Cat. 95*, *96*), wading birds (*Cat. 101*, *102*), a parakeet-like bird (*Cat. 103*), a fish (*Cat. 109*), hoofed animals, possibly gazelles (*Cat. 111–114*, *116*, *117*), a lion and a lioness (*Cat. 118*, *119*); and an unidentified animal with a long neck and rounded ears (*Cat. 120*). The vegetal motifs include non-specific plants, sometimes depicted growing from strips of ground (*Cat. 130*, *134–136*, *139*, *142*), generic red flowers (*Cat. 147*), foliage with flowers or fruit (*Cat. 151*, *152*), pomegranates, some of them set in foliage (*Cat. 156–159*), a palm tree (*Cat. 161*), and vegetal scrolls with flowers (*Cat. 163*, *164*). Two elements with the inhabited scrolls motif arranged in a horizontal frieze were also found (*Cat. 169*). This repertoire of nature-derived images is further complemented by the red linear depictions of animals and possibly of genre(?) scenes, such as peasants at work (*Cat. 179–186*).

The depicted animal and plant species are very much similar to the fauna and flora from the basilica. Additional species, which do not occur in the basilica, include a fish possibly hanging from a hook, depictions of a lion and a lioness, and wading birds which probably introduce a Nilotic landscape as one of the subjects in the repertoire. The animals, like the depictions from the basilica, are represented among generic plants. They all appear to be captured statically, except for *Cat. 114*, which appears to be the hind leg of a running equid or bovid.

Saidah, who first excavated the residential district and unearthed many of the fragments discussed here, was under the general impression that the houses were decorated with images of an idyllic, Earthly Paradise (Saidah 1977: 41–42). He envisioned scenes with working peasants, haloed saints among palms and pomegranate trees, birds, and gamboling feline and equid animals. Even though there are no surviving examples of wall paintings from Late Antique domestic interiors which could parallel the depictions of nature found in Porphyreon, and the textual sources on this subject are mute, Saidah's impression seems correct. The iconographic program of the dwellings could have had a similar purpose as that of the basilica: to evoke a vision of the Heavenly Kingdom and to create an atmosphere of idyllic bliss. This supposition is also supported by the fact that the depictions of crosses, haloed figures, and religious inscriptions found in the same contexts give the overall decorative program a strongly religious character. Such an iconography appears especially apt for residential Complex 8, which yielded numerous bronze liturgical objects and thus might have been used by church dignitaries, but it also does not seem improbable in ordinary houses. The aforementioned homilies of St John Chrysostom testifying to (and encouraging) the practice of placing a sign of the cross wherever possible (*Homiliae in Evangelium Matthaei*, LIV, and *Contra Iudaeos et gentiles*), the belief in the apotropaic and intercessory function of images of saints placed inside houses attested by historical sources

(e.g., the previously cited *Vita S. Eutychii* and *Miracula SS. Cosmae et Damiani*), the apotropaic function of Christian symbols, images, and texts executed on personal objects, as well as the evidence for incorporating religious themes in house textiles or even garments,[19] all convey a picture of the omnipresence of religious elements, both visual and textual, in Late Antique profane spaces. The wall paintings from the Porphyrean houses are an important contribution to this picture.

6.2.6 Architectural context and role of painted inscriptions

A distinct group of wall paintings from the basilica and the residential district comprises fragments of painted inscriptions. They have not yet been discussed along with the individual subjects of the iconographic programs because they are primarily epigraphic finds, in greater part independent of the pictorial arts. Nevertheless, a few points can be made on their contents, architectural settings, and their relation to the iconographic programs of both complexes.

All of the discovered inscriptions are of a religious character. All of the reconstructed texts come from the residential district and were documented on Saidah's slides (*Cat. 187–193*), whereas the basilica yielded only small fragments of words.

Residential district

The readable painted inscriptions from the residential district include short laudatory appellations and the incipits of two Psalms (for the readings see above, *§ 5.9*):

- "Jesus Christ reigns" (*Cat. 187*)
- "In this you shall conquer" (*Cat. 188*)
- "Our God, glory to you" (*Cat. 189*)
- "Protection of the faithful" (*Cat. 190*)
- "Emmanuel, God is with us" (*Cat. 191*)
- "The Lord is my light and my salvation. Whom should I fear?" (Ps. 26:1; *Cat. 192*)
- "Whoever dwells in the shelter of the Most High will rest in the shadow of the Almighty. I will say of the Lord, 'He is my refuge' " (Ps. 90:1; *Cat. 193*).

All of these inscriptions were accompanied by depictions of crosses, except for the inscriptions *Cat. 191* and *Cat. 193*, where the state of preservation precludes any such determination. All of the texts were clearly predestined to serve an apotropaic function and to acclaim the glory of God and Christ.

The exact findspots of the texts are unknown except for the inscriptions *Cat. 187* and *Cat. 188*, which were documented *in situ*.[20] Located on either side of a passage between courtyard D11 and room D12, at eye level if the archival slides are anything to go by, they were to be seen by those

[19] On domestic textiles with Christian iconography see Maguire 1990; De Moor and Fluck 2009. From Asterius of Amaseia (*Homilia de divite et Lazaro*) we learn about garments embroidered with stories from the Gospels and images of Christ and the disciples.

[20] Now lost; the only surviving fragment is *Cat. 188* rediscovered by the PCMA-DGA expedition.

entering the room. It is possible that the remainder of the inscriptions were also placed in transitional spaces to guarantee maximum visibility.

The best parallel for depictions of crosses accompanied by laudatory formulas in the somewhat modest body of Late Antique painted inscriptions from the Eastern Mediterranean is the find from Caesarea. A structure in Area KK, identified by the excavators as a chapel possibly dedicated to St Paul and dated to the 6th century, yielded fragments of texts, depictions of jeweled crosses, and haloed figures (Di Segni 2000). A few of the deciphered inscriptions were originally located beneath the crosses and contained appellations to the holy symbol (e.g., "pride[?] of the martyrs"), that likely derive from laudatory texts such as *In venerabilem crucem sermo* (*CPG* 4525) or *In adorationem venerandae crucis sermo* (*CPG* 4672) attributed to St John Chrysostom (Di Segni 2000: 388–389; Suciu 2017: 44–45). The latter homily contains, for example, an epithet of the cross πιστῶν ἀσφάλεια, "the safety of the faithful", which parallels in its general concept the inscription on *Cat. 190* from Porphyreon. Another example of a painted simple red cross accompanied by an inscription, unfortunately not reconstructable as a coherent text, comes from the 6th–8th century context of the West Acropolis Mansion at Tell Madaba (Foran 2007).

Even though the decoration of the ground-level rooms of the dwellings at Porphyreon was confined to simple red crosses and painted inscriptions and thus there is not much to be said about the relation between these inscriptions and the iconographic program, one point can be made: texts such as "In this you shall conquer" (*Cat. 188*) and "Protection of the faithful" (*Cat. 190*) could not be fully understood without the accompanying crosses to which these formulas refer. This illustrates an important concept of words and images constituting two elements of one "language", a concept already appearing in Christian inscriptions from the 4th century and expressed in the early decades of the 5th century by Paulinus of Nola (Felle 2018: 52; Leatherbury 2019).

Passages from the Psalms were the most frequently inscribed biblical texts in Late Antiquity, and they were often selected according to the function of the architectural setting or the object that they were inscribed on (Feissel 1984; Felle 2006: 419–422, Figs 14, 17–18; 2015: 359). For example, Psalm 90 (91), whose incipit contains the verb κατοικέω, "to dwell", "to reside", was especially suitable for a domestic setting (*Cat. 193*). Nevertheless, even though the incipit refers to the notion of dwelling, the words of Psalm 90 (91) appeared also on various portable personal objects, extending its apotropaic powers over the owner of the inscribed item (Kraus 2005; 2009).[21] Other examples of popular Psalms connected to a specific architectural setting are Psalms 117:20 (118:20)—"This is the gate of the Lord through which the righteous may enter"—and 120:8 (121:8)—"The Lord will watch over your coming and going both now and forevermore"—which were frequently placed above doorways, in particular in Syro-Palestine (Felle 2006: 421; 2015: 360–361, 365; also see Prentice 1906); the latter Psalm was among the most popular in private houses (Feissel 1984: 227, 229).

[21] On inscriptions in Late Antique houses, as well as on furnishings, and personal objects see Scheibelreiter-Gail 2012.

Basilica

Among the painted texts coming from the basilica, there are only a few fragments large enough to preserve a word or its fragment. They include ἐν βοηθείᾳ (*Cat. 194*), a form of the word οὐρανός (*Cat. 196*), and τοῦ ὑψίστου (*Cat. 197*). All of these words also appear in texts from the residential district and therefore could belong to the same citations. However, the popularity of these particular expressions in biblical texts presents many other options of their use, so the contents of these inscriptions cannot be determined with certainty.

Similarly to secular settings, the contents of inscriptions found in churches were oftentimes associated with the particular context that they adorned.[22] For example, fragments of Greek texts painted in red on white plaster, including the word "Forerunner" (πρόδρομος), an epithet of St John the Baptist, were found in a chapel in Petra where a baptismal font was once located (Frösén, Sironen, and Fiema 2008: 273, 278–280). Psalm 28:3 (29:3)—"The voice of the Lord is upon the waters; the God of majesty hath thundered, The Lord is upon many waters"—which frequently appears on bronze vessels and marble slabs (Feissel 1984: 226), was also associated with baptismal fonts and water.[23] In a cistern converted into a chapel in Salamis, Psalm 28:3 occurs in conjunction with 2 Kings 2:21—"This is what the Lord says: 'I have healed this water'"—and a number of apotropaic and laudatory formulas addressed to the cross, Constantine, St Barnaba, and Epiphanius; the texts are accompanied by a small Nilotic landscape [see above, *Fig. 5-38*]. The verbal and textual references to water led Marina Sacopoulo to suggest that the chapel was used for purification and healing rituals (1962). Alternatively, we may suppose that it served as a baptistery. Psalms 117:20 (118:20) and less frequently, Psalms 83:11–12 (84:11–12) —"For the Lord God is a sun and shield; the Lord bestows favor and honor; no good thing does he withhold from those whose walk is blameless. / Lord Almighty, blessed is the one who trusts in you"—and 99:4–5 (100:4–5)—"Enter his gates with thanksgiving and his courts with praise; give thanks to him and praise his name. / For the Lord is good and his love endures forever; his faithfulness continues through all generations"—surmounted the entrances to churches (Feissel 1984: 225–226; Felle 2015: 361–362).

The two examples of surviving painted inscriptions from churches involve texts with explicitly apotropaic and laudatory purposes. Fragments of verses 4 to 7 of Psalm 90 (91) ("He will cover you with his feathers, and under his wings you will find refuge; his faithfulness will be your shield and rampart. / You will not fear the terror of night, nor the arrow that flies by day, / nor the pestilence that stalks in the darkness, nor the plague that destroys at midday. / A thousand may fall at your side, ten thousand at your right hand, but it will not come near you") painted in red on white plaster were recovered from Petra (Frösén, Sironen, and Fiema 2008: 280, Col. Pl. 53). A quote from Psalm 33:5 (34:5)—"Those who look to him are radiant; their faces are never covered with shame"—inside a *tabula ansata*, painted in red on a plastered limestone slab, was found in the Church Complex of St Stephen in Umm er-Rasas/Kastron Mefa'a (Piccirillo and Alliata 1994: 263–264, Pl. 26.5).

[22] The focus here is on citations from the Scriptures because they seem the most relevant to the fragments from the basilica at Porphyreon. They were, however, only one of many categories of inscribed texts that can be found in churches. On commemorative inscriptions, ekphrases, and inscribed prayers see Leatherbury 2019.

[23] For example, a marble slab with this passage from Petra (Frösén, Sironen, and Fiema 2008: 277).

In most cases, however, painted inscriptions are preserved as small fragments of plaster found in debris, and even a meticulous reassembly does not always result in a readable text. Fragments testifying to the presence of painted inscriptions are known from a number of sites, but their condition does not permit interpretation. For example, significant numbers of fragmentary inscriptions painted on plaster were discovered in rooms presumed to have been used for religious ceremonies, located south of the atrium of the Propylaea Church at Jerash/Gerasa (Del Corso and Mastrogiacomo 2007: 194–199). The fragments are thought to come from 11 different texts. Some of them were in white paint on an orange or red background, while others were painted in red on plain white plaster. The content was not determined beyond that the texts were invocations to Christ and God (e.g., κύριε ὁ θεὸς παντοκράτωρ ἐλέησον ἡμᾶς). Numerous small pieces of plaster with fragments of unidentified black text were found in a room adjacent to the southern aisle of the church at Rehovot-in-the-Negev (Tsafrir 1988: 178–182, Fig. 270). The excavator suggested that the text might have appeared on a scroll held by a saint in a large figural representation. Fragments of red-painted letters were found in the North-West Church at Hippos-Sussita (Burdajewicz 2017: 164).

Religious and commemorative inscriptions were present on lintels, chancel screens, ambos, and floor mosaics of early Christian churches (Leatherbury 2019). The recovery of fragments of inscriptions painted on plaster introduces yet another kind of carrier of the written word. This leads us to the question of the relation between the painted inscriptions and the iconographic program of the wall decorations.

Inscriptions featured in the extant wall decorations from Late Antique churches appear either as *tituli* of the depicted personalities (e.g., Transfiguration mosaic in Sinai; James 2017: 223–225, Fig. 86) or on the scrolls or codices held by the figures (e.g., apse of the Church of Hosios David in Thessaloniki; Bakirtzis, Kourkoutidou-Nikolaidou, and Mavropoulou-Tsioumi 2012: 183–195, Fig. 5). In either case, the text is subordinate to the pictorial program: it gives identity to the depicted people or serves as their attribute. Needless to say, it is also structurally incorporated into the composition of the image. In addition, studying surviving wall mosaics, Antonio Felle notes a tendency for inscriptions to become smaller starting from the 6th century, thus becoming hard to read, first for the faithful looking from a certain distance, and then even for the clergy assembled in the presbytery (Felle 2018: 57–61). The text is gradually deprived of its informative role and becomes merely an element of the image. Furthermore, even in instances when an inscription is granted autonomous space, figural representations are still more important. For example, in the Orthodox Baptistery in Ravenna four relatively large and easily legible inscriptions surmounted four apses, but they conveyed commentaries to the scenes once depicted in these apses (Rizzardi 2012: 77–78, Figs 53–54). In this particular case, the texts still make sense even when the images are no longer there,[24] but as noted before, there were instances where inscriptions without the accompanying image would become ambiguous or difficult to understand.

Unlike these examples, the painted inscriptions from Syro-Palestinian churches, including those from Porphyreon, do not appear to have been incorporated into images. In the Church Complex of St Stephen in Umm er-Rasas/Kastron Mefa'a, the verses of Psalm 33:5 (34:5) were

[24] The inscriptions are associated with the baptismal rite and with redemption. Two of them describe the now-lost scene of Christ walking on the Sea of Galilee and Christ washing feet of the disciples, the other two speak of absolution of sins (Rizzardi 2012: 77–78).

enclosed in a *tabula ansata*, so they appear as an independent entity (Piccirillo and Alliata 1994: 263–264, Pl. 26.5).[25] In Petra, some of the fragments were bordered by multicolored bands which possibly separated them from other elements of the iconographic program (Frösén, Sironen, and Fiema 2008: 278–279, Col. Pls 49–52). Similarly, in the Propylaea Church at Jerash/Gerasa, some of the inscriptions were arranged in long horizontal bands featuring various colors (Del Corso and Mastrogiacomo 2007: 194–199).

None of the inscriptions from Porphyreon retains any frame, although this may be an accident of preservation. At the same time, a number of artistic and technical features betray that many of these texts were not painted spontaneously but were well-thought-out and rendered with diligence. The characters represent different styles of lettering and feature various embellishments, which make them aesthetically pleasing. In addition, the letters are usually spaced regularly, indicating a pre-planning of the length and arrangement of the lines. In Umm er-Rasas/Kastron Mefa'a, the text was aligned along painted horizontal lines, while in Porphyreon a neat alignment was ensured by use of the "snapped line" technique (see above, *§ 3.7* and *§ 5.9.1*).

The above examples suggest that painted inscriptions might have been an important component of wall decorations in Syro-Palestinian churches, albeit not as subordinate elements of figural images. They appear to have been independent entities with their own aesthetic value. The notion of granting painted texts an autonomous space or even making them the principal element of the wall decoration is well illustrated by the remains of wall paintings from the synagogue at Rehov (Vitto 1982; 2015). The faces of pillars along the nave of the prayer hall were filled with Aramaic and Hebrew inscriptions painted in red on white plaster. Some of them were placed inside schematically rendered wreaths. One inscription that, besides being enclosed in a wreath, is placed in a *tabula ansata*, lists the names of the donors and some of their professions. Other inscriptions relate to the life of the community and their religious activities (e.g., the list of fast days or a letter to the community clarifying the observance of the religious agricultural laws in the vicinity of the gentile town of Scythopolis). Painted inscriptions constituted the vast majority of the paintings discovered at Rehov, although non-textual decorative motifs were also found.[26] Considering the scarcity of surviving wall paintings from Late Antique Syro-Palestinian synagogues and churches, it would be far-fetched at this point to assume mutual inspirations, but perhaps it is worthwhile to ask whether including autonomous painted texts in the iconographic programs of churches could have been influenced by a similar practice in contemporaneous synagogues.

It should also be kept in mind that painting allowed for an effortless and artistically more diverse rendering of the script than, for example, stone carving. The technique itself opened many possibilities for embellishing the inscriptions and conferring on them aesthetic values. In a study of the artistic value of inscriptions in Byzantium, Andreas Rhoby argues that monumental texts in an architectural setting must have had their impact even on the illiterate, who sensed the importance of the contents (Rhoby 2017: 275–276). Similarly, Antonio Felle and Sean Leatherbury demonstrate that inscriptions were conceived as items not only to be read but also to be seen (Felle 2017; Leatherbury 2019).

[25] On *tabula ansata* and other framing devices of Late Antique inscriptions, see Leatherbury 2019: 82–140.

[26] They include a schematically rendered coffered ceiling, a depiction of a fish, a menorah, and a Torah shrine or Temple façade.

This seems plausible also from a practical point of view, because the characters of some of the recovered texts are relatively small. For example, the characters of the previously mentioned inscriptions from the Propylaea Church at Jerash/Gerasa were generally 4–5 cm tall, meaning that they were readable only at a close range. Nevertheless, even though they could have been hard to decipher from a distance, they would still be *seen* as colorful bands of signs. In the basilica of Porphyreon only the *titulus* on *Cat. 88* and the inscription on *Cat. 206* have relatively small characters, measuring 5 and 6 cm, respectively. Many other fragments of scripts were 8–12 cm tall, whereas in a few cases the characters were as tall as 14 to 18 cm (especially *Cat. 199*, *204*), making these texts legible even from afar.

The Late Antique mural decorations that survive in the West saw a gradual hybridization of the word and the image into one language. However, it appears that the painted inscriptions from Porphyreon and from the other churches in the East mentioned here were still granted a separate and autonomous space in the iconographic programs of these churches. Whether the contents of these inscriptions corresponded to the images is something that cannot be established based on currently available evidence.

6.3 Style

A discussion of style and compositional schemes is a daunting task at the very least considering the fragmentary condition and abrasion of many of the representations. Any assessment of style and artistic value is naturally possible only for the best-preserved fragments.

There are two major ways in which the figures are depicted in the wall paintings from Porphyreon: animals are in all cases captured in profile view, whereas human figures are almost always rendered frontally. In the case of imagines clipeatae (*Cat. 84*) and orantes (*Cat. 85–88*) this is hardly surprising because a frontal view was idiosyncratic for these iconographic formulas. The only fragments to represent people in three-quarter view were the presumed genre scenes (*Cat. 89*, *90*, *180*). Apart from these, the frontal or profile views to which the figures are restricted and the absence of foreshortening creates a strong effect of two-dimensionality. In addition, such treatment of the figures renders them rigid and limits the means of expressing movement. Again, the only motion that is to be observed is in the genre(?) scenes, where the subject, possibly related to some rural activities, required at least minimal animation of the human body.

Animal depictions appear somewhat more animated and flexible than those of humans. A few fragmentary representations of equids or bovids show the hind legs stretched out behind the animals as if in the act of running (*Cat. 114*, *115*). One fragment depicts a doe-like animal raising its head to reach for a leaf (*Cat. 112*). An echo of naturalism in this depiction may also be seen in the way the animal's ears are casually pointed in different directions.

A suggestion of movement appears also on *Cat. 111*, although here it seems to serve a different purpose. The image is of a presumably hoofed animal with its foreleg lifted and bent at the knee (the front part of the animal is preserved). The pose is reminiscent of heraldic representations of animals, usually rams or stags, flanking a centerpiece depiction. This is the pose, for example, of a pair of rams flanking a pomegranate tree in the chapel adjacent to the Church of the Apostles at Madaba (578; Piccirillo 1997: 106, Fig. 92) [see above, *Fig. 5-47*], as well as by a pair of rams

flanking a *kantharos* from the lower Chapel of the Priest John at Wadi ʻAfrit (565; Piccirillo 1997: 176, Fig. 237). Therefore, even though the lifted leg is indicative of movement, in this particular iconographic scheme it serves to emphasize the representativeness of a heraldic image, which is generally typified by rigidness and stillness.

Some distant echoes of the movement and naturalism of Graeco-Roman painting is to be detected in a few representations of birds. We see partridges plucking plants (*Cat. 31*, *97*, *98*), pigeons pecking on the ground (*Cat. 100*), and a gray wader reaching for food at its feet (*Cat. 102*). Even the depiction of a peacock perched above an arch (*Cat. 94*) creates a subtle illusion of movement in the details of the bird's body: its S-bent neck and the naturalistic position of its legs. The other depictions of birds and beasts generally appear rather motionless.

The two-dimensionality of the figures and objects (e.g., crosses) is further emphasized by the flat treatment of colors, an advanced stylization of form and, in some cases, careless paint handling. In general terms, the paint layer buildup can be said to consist of a more or less solid base color and the details rendered on top of it. Many of these details, such as the precious gems on jeweled crosses, details of bird plumage (e.g., *Cat. 97*), and the beasts' pelages, are highly stylized and decorative. The schematization of the ovines (presumably lambs) shown on *Cat. 110* and *Cat. 111* reached a point where the pattern on the pelage cannot be considered distinctive for the depicted species; on the contrary, it hampers its identification.

Most of the representations have contours, although the tonality is kept within the depiction making them not very distinct. Markedly dark contours are generally avoided, perhaps with the exception of the partridges adoring a cross on *Cat. 31* and a lamb on *Cat. 110*. Shading and tonal transitions are few, meant to emphasize anatomical details, like in the example of the lioness (*Cat. 119*) where the neck is visibly darker than the head. Also, the garments of the figure in the imago clipeata (*Cat. 84*) show some tonal transitions; in addition, the sitter's neck is lighter in front, directly under the chin, and darker on the sides, indicating an attempt at three-dimensionality. Gentle shading on fruit set in foliage is intended to render their roundness (*Cat. 45*, *153–155*, *175a*). The only depiction with a convincing illusion of three-dimensionality is the "gemstone" band (*Cat. 77*). The impression of the convexity of particular "gems" is achieved through a gradation of colors ending with an off-white "wedge" of reflected light [see above, *Fig. 6-7*].

Apart from these examples of more or less successful shading, the artists working at Porphyreon fail to have used a play of light and shadow to render the three-dimensionality of figures and objects. In view of such flat treatment of most of the depicted subjects, the "expressionistic" rendering of foliage on several fragments is noteworthy (*Cat. 150–155*, *158*). *Cat. 151* and *Cat. 152* deserve special attention for a convincing rendering of foliage achieved through a skillful application of just two colors (green and ocher) in a watercolor-like manner. Similarly painted shrubs also appear in the representation on *Cat. 31*.

The illusion of space is minimal to nonexistent. Nearly all the motifs are depicted against a solid white background. The exceptions include a presumed genre scene (*Cat. 90*) and a flamingo-like bird (*Cat. 101*), both on a grayish-beige color. Furthermore, the inhabited scrolls were represented against light yellow bands, possibly to emphasize their frieze-like function. The figure in the imago clipeata is portrayed on a blue background (*Cat. 84*), and crosses appear against a green disk in one case and bluish-gray in another (*Cat. 46* and *Cat. 67*, respectively). Nevertheless, the imago clipeata as such and the medallions enclosing the crosses were set against a white background.

It has been proposed above that the animals in the wall paintings from Porphyreon may have been portrayed in a paradisiacal landscape. However, schematic, generic plants are the only suggestion of natural surroundings for these faunal representations. The plants are shown growing from strips of ground represented with a single brushstroke as a rule. It is probable that the animals were also depicted standing on ground suggested cursorily in this way. This is corroborated by strips of color beneath the feet of the birds on *Cat. 103* and *Cat. 108*. The ground is the only device anchoring the animals and plants in a hypothetical landscape. Without it, the fauna and flora would have been floating in abstract space.

Particular elements of the compositions seem to stand in isolation, although given the fragmentary condition of the paintings, one cannot claim with full certainty that there were no compositional connectors, like longer strips of ground, between them. Some animals appear to be interacting with the landscape, such as the presumed doe reaching for a leaf (*Cat. 112*), but in many cases they appear to be just staring motionless at the plants (e.g., *Cat. 119*). Another instance where a clear connection is made between elements of the iconographic program is in the heraldic representations of birds adoring a cross or a medallion with a cross (*Cat. 10*, *31*, *33*, *99*). A similar representation could have been featured on a fragment with an equid or bovid lifting its foreleg (*Cat. 111*), in a pose very often assumed by hoofed animals flanking a centerpiece depiction on floor mosaics.

Regarding matters of composition, one is led to the conclusion that there were two principal schemes (without ruling out other arrangements). The first involves animals and plants set against a plain background, on strips of ground, with or without compositional connectors between them. The second features symmetrical compositions organized around an item placed in the center, such as a cross. Both schemes are common on mosaic pavements of Late Antique buildings.[27] Carpets populated with different species of animals decorated the Villa at Jenah (late 5th century; Chéhab 1957: 64–73; 1959: Pl. XXXI), the "four-pillar chapel" of Basilica A at Resafa (late 5th century; Ulbert 1986: 100–101, Pl. 39.1) [see above, *Fig. 6-11*], and the Church of St George at Houad (approximately 568; Donceel-Voûte 1988: 138–145). In all of these cases, figures of animals are scattered somewhat at random over the carpet. A different treatment of the composition and space is presented by the renowned mosaic from the Old Diakonikon in the Basilica of Moses on Mount Nebo (530; Piccirillo 1997: Fig. 166). Youths leading animals, pastoral scenes, and scenes of the hunt are all arranged in clearly marked, horizontal registers. Meanwhile, the hunt mosaic from Gaza-Jabaliyah shows a mixed approach to the organization of space: the figures are arranged in registers which are not distinctly marked, and the composition does not seem to be as rigid as in the hunt from Mount Nebo (Humbert et al. 2000: Fig. on page 123).

The determination of the spatial distribution (scattered or organized in registers) of various elements of the presumed animated landscapes from Porphyreon is hampered by the fragmentary state of the paintings, but a tendency towards symmetry is easily noticeable even on the incomplete depictions. Symmetrical compositions include birds flanking a cross (*Cat. 10*, *31*, *33*, *99*, *108*?), birds and plants flanking an opening in the wall (*Cat. 97*, *98*, *122*?, *151*, *152*), crosses and

[27] For an overview of carpets with freely scattered figures as well as those organized in panels see Talgam 2014: 108–120. Rachel Hachlili approaches these mosaics from the point of view of the depicted subjects (Hachlili 2009: 149–178). She also deals with the motif of antithetical pairs of animals (Hachlili 2009: 199–208).

inscriptions flanking a passage (*Cat. 187*, *188*), and the depiction of a peacock perched on an arch, very likely faced by another peacock (*Cat. 94*). Such symmetrical arrangements built around a focal point create an emblem, a heraldic motif, and thus they spare the artist the obligation of creating an illusion of depth or space. This compositional formula seems characteristic of Late Antique art. Besides the previously mentioned examples of pairs of animals facing each other from the Chapel of the Priest John at Wadi ʻAfrit and the Church of the Apostles at Madaba, parallels to the compositional schemes employed in Porphyreon can be found in Porphyreon itself, in the motif of two pheasants flanking a *kantharos* [see above, *Fig. 5-40*], in Aluma where two pheasants bow to a golden cross (6th century; Talgam 2014: Fig. 270), and in the presbytery of the Church of the Holy Martyrs Lot and Procopius at Khirbet al-Mukhayyat, where a pair of sheep are shown facing a tree set between them (557; Piccirillo 1997: 164–165, Fig. 214). This tendency towards symmetry in wall painting can be traced back to sepulchral depictions where pairs of objects or animals facing one another were used to draw attention to a painted inscription or portrait of the deceased, or to flank an arcosolium (Smith and Mare 1997: 311–312; Barbet and Vibert-Guigue 1988–1994: 163, Pl. 78; Michaeli 2009: 146).

Last but not least, there is the matter of distinctive groups of paintings representing different manners of paint-handling and levels of artistic proficiency. Among the wall paintings from Porphyreon one can distinguish fragments, which seem to betray the hand of a practiced artist, as well as motifs made apparently by beginning apprentices or less skilled artists. Having said that, we must remember that ancient viewers did not look at the wall paintings at the same close range that we can today (especially in the spacious basilica, where images would have appeared way above eye level), hence their overall appearance on the walls might have been in fact more appealing and harmonious than suggested by a close-up examination of the style of particular fragments. Also, it is important to keep in mind that we cannot be certain whether the differences in artistic quality are due to different campaigns of work carried out by different workshops or the input of painters of different skill. For the basilica it would be logical to assume one team of artists executing the original decorations during a single painting campaign, even if drawn out over some time. In the residential district, however, a staggering of painting commissions is only natural and would explain the observed differences in style as resulting from the work of different artists demonstrating varying artistic and technical skills.

The stylistic groups that were distinguished in the assemblage from Porphyreon took into account differences in the rendering of particular subjects and the paint handling. The first criterion may be applied to the images of crosses in wreaths, partridges, and peacocks, because these subjects are represented by at least three examples in each case. There is a broadly differing care for details and naturalism in the representations of wreaths. For example, the foliage of the wreath on *Cat. 45* is rendered with at least two shades of green, the fruits appear in various colors and are shaded, and the members of the cross are straight. Meanwhile, *Cat. 46* shows a blurry mass of leaves, only red fruit, and somewhat distorted contours of the cross. Similarly, the medallion on *Cat. 50* is filled with scribbles which only vaguely resemble vegetal motifs [*Fig. 6-22* top]. These differences are reflected by the paint-layer stratigraphy. The neatest, most careful rendering of a wreath (*Cat. 45*) has a layered, well-considered buildup, whereas the other two examples were painted "wet-into-wet", as if with no compositional pre-planning.


▲ *Cat. 45b*


▲ *Cat. 46*


▲ *Cat. 50*


▲ *Cat. 31bc*


▲ *Cat. 97*


▲ *Cat. 99*


▲ *Cat. 94*


▲ *Cat. 95*


▲ *Cat. 96*

Fig. 6-22. Different painting styles: top row, foliage on wreaths; center row, partridges; bottom row, peacocks (in the lattermost case note the stylistic similarities between *Cat. 94* and *95*)

Different treatment is evident in the partridges as well (*Cat. 31*, *97*, *99*), although the discrepancies in quality are not as apparent as with the wreaths. In fact, each of these representations owes its decorative appeal to the individual treatment of the subject, and hence could be ascribed to the work of three different artists [*Fig. 6-22* center]. Dissimilarities are also noticeable between the representations of peacocks on *Cat. 94* and *Cat. 95*, which are likely the work of one hand,[28] and the peacock on *Cat. 96*, which does not match their artistic level [*Fig. 6-22* bottom].

[28] The two show strong stylistic similarities, but they come from different contexts: *Cat. 94* was found in 1987 in the basilica and *Cat. 95* in 1975 in the houses. A twofold explanation is possible of this apparent stylistic relationship: either they were painted by an artist working in both complexes (entirely possible) or they belonged to one composition, but one of them was taken out of its context. In either case, the location of the peacock on an arch, its artistic quality and the stylistic similarities with a number of fragments from the basilica make it probable that *Cat. 94* belonged to the decoration of the basilica.

A comparison of the paint layer buildup on *Cat. 94* and *Cat. 96* (*Cat. 95* is one of the fragments that is now lost) reveals a divergence similar to that of the wreaths: the former has an organized, layered buildup (which includes a preparatory underpainting), whereas the latter was painted "wet-into-wet", in a spontaneous and disorderly manner.

A compelling case is presented by the depictions of a presumed lamb (*Cat. 110*) and a peacock (*Cat. 94*). Both fragments come from the basilica, so they could be contemporary and executed by the same team of artists. They both show a layered buildup of the paint. However, the difference between the naturalism of the bird and the schematization and stiffness of the lamb is evident. Even though this could be best explained by different artists executing these images, another possibility to be entertained is that the artist was relying on his memory when painting the lamb, while the peacock was copied from a model book.[29] Seeing livestock on a daily basis, the artist could have ventured to recreate it from memory; however, to represent a peacock, an animal certainly rarely encountered by ordinary people, he would have resorted to a small-scale exemplary model. Paradoxically, a careful copying of that model could have resulted in a more truthful and successful representation than an image of a common animal created from memory. This leads to the conclusion that the differences in the truthfulness and naturalism of the rendering of particular creatures need not indicate the work of different artists.

Returning to the role of paint-layer buildup for the assessment of the artistic quality of particular paintings, it can be used to distinguish different groups of paintings. The representations of peacocks on *Cat. 94* and *Cat. 95*, as well as partridges on *Cat. 97* and *Cat. 98*, have in common a stylization of forms and details combined with a certain effortlessness of execution. They also display very similar paint handling characterized by a layered, well-considered buildup, which includes a preparatory ocher underpainting absent from the other examined fragments (see above, *§ 3.7*). These features allow them to be grouped as one style. Furthermore, the gemmed band on *Cat. 77* can reasonably be assigned to the same assemblage of paintings. The end of a peacock's train discernible at the edge of the white field adjacent to the band resembles very much that on *Cat. 94*: the colors and paint build-up are the same. In addition, *Cat. 78* features a "gemstone" decoration very similar in rendering to *Cat. 77*, although the motif is smaller in scale. The black color shared by *Cat. 77*, *78*, *97*, *98*, and *104* is uncommon on other fragments of paintings, and if present, used very sparingly. The paint is also thickly applied on these fragments. They all come from the basilica and it is thus very likely that they were all painted during one campaign of work, perhaps even by the same artist.

Another group of fragments displaying a coherent style and paint handling are the ones bearing inhabited scrolls, from a horizontal frieze (*Cat. 170*) and from the face of an arch (*Cat. 171a*, *172*, *173a*, *174a*, *175a*, *176a*). There are slight differences between the two sets, as revealed in

[29] The existence, use, and circulation of model books is a long-disputed subject. Even though no such book has actually survived, their existence is generally accepted by many scholars dealing with both the monumental and the minor arts of Antiquity and Late Antiquity on the basis of the recurrence and popularity of certain iconographic motifs and compositional schemes throughout the Mediterranean world and beyond. Their use is assumed or suspected in wall painting (Ling 1991: 217–218; Clarke 2010), mosaics (Hachlili 2009: 273–275; Dunbabin 2012: 302; Poulsen 2012: 133), architectural decoration (Ovadiah and Turnheim 1994: 111), and codices (Stevenson 1983: 109–112). The use of illuminated codices or scrolls as models was suggested in the case of biblical scenes in catacomb painting (Tronzo 1986: 28–29). Diklah Zohar (2008) presents an interesting discussion of the possible use of model books by mosaicists executing depictions of exotic animals.

the treatment of animals visible inside the scrolls. The dog and the rooster on *Cat. 170* were rendered with a thick, opaque paint and have marked contours. Meanwhile, the partridge inside the scroll on *Cat. 171a* is painted rather thinly, with toned-down colors. Nevertheless, succulent acanthus leaves rendered with coarsely ground viridian-green appear on all fragments, making it probable that they were executed by one team. While it is difficult to be sure that this group was associated with the paintings discussed in the previous paragraph, both assemblages can be said to represent some artistic refinement and skill.

The representations of birds and beasts from the residential district show a different kind of treatment (*Cat. 96*, *101–103*, *111–114*, *116–120*). They are generally executed with broad brushstrokes and the colors blend one into another in a manner typical of the "wet-into-wet" painting technique. Particular depictions are restricted to a narrow color scale (e.g., red and pink for *Cat. 101*, brown for *Cat. 111*, *113*, *114*, *116*, *117*; buff for *Cat. 112*, *119*, *120*; and orange, pink, and dark red for *Cat. 118*). Only the peacock on *Cat. 96* features a blend of different colors. In most of the extant fragments, the paint is thickly applied. Whether these fragments could be grouped as the work of a single team working at one time is hard to say. In general, the painting manner, best described as spontaneous, quick and somewhat disorderly, clearly differs from that of the assemblages from the basilica described above.

Distinct from these paintings are the two partridges from the residential district, shown plucking shrubs on two sides of what used to be a jeweled cross (*Cat. 31*), and two symmetrical fragments showing plants with dense foliage (*Cat. 151*, *152*). These fragments have in common the use of a semi-translucent, watery paint, especially visible in the treatment of the plants, and a skillful handling of a limited spectrum of colors. They betray the proficiency of their creator who—with a few colors and superimposed applications of semi-transparent paint—was able to achieve more naturalistic effects than the artists spreading thick layers of colors and scribbling in details.

The last group showing a distinctive style and manner of execution comprises simple depictions in red: genre(?) scenes, animals, plants, geometric patterns, and one fragment of an inhabited scrolls motif (*Cat. 10*, *79*, *80*, *105–107*, *165–168*, *178–186*).[30] Save for four from the basilica (*Cat. 79*, *107*, *168*, *178*), they all come from the residential district. These depictions are among the least sophisticated paintings made in Porphyreon, this because of the application of just one color, a cursory, somewhat careless (or perhaps unskilled?) paint handling, and the schematic rendering of the subjects. Nevertheless, even within this category of paintings, there are depictions of running animals (*Cat. 182*, *183*) with fluent, flowing lines betraying a sure hand. By contrast, the simple zigzag ornament on *Cat. 80* was rendered with stiff, clumsy strokes.

Overall, regardless of the stylistic variations evident between particular assemblages, the wall paintings from Porphyreon may be characterized as flat, schematized, two-dimensional depictions, restricted to profile and frontal views in the case of figures, with minimal or non-existent shading, merely anchored to the ground, set against a solid white background, and with a very limited illusion of space. All of these features are in line with the Late Antique shift away from the Graeco-Roman naturalism and illusionism, toward schematization, stiffness, and two-dimensionality.

[30] The simple red crosses are deliberately left out here because their simplicity was dictated by their symbolic function which overrode their aesthetic appeal.

The origins of such stylistic idiosyncrasies in the wall paintings may be traced back to the 2nd century CE (Kitzinger 1995: 20). A trend toward a frontal rendering of human figures appears in post-Pompeian Romano-Campanian wall painting, for example, in the Catacombs of St Callistus at Rome (Finney 1994: 191, 198). From the Severan period (193–235) onwards, the figures become progressively simplified, stiff, and unconvincing, although a short yet noticeable revival of naturalism, described by Roger Ling as the swan song of Graeco-Roman illusionism, took place in the late 3rd and 4th centuries (Ling 1991: 186–187, 194–196). In the East, a progressing trend toward frontal rendering and schematization of the figures can be observed in the wall paintings from, for example, the Tomb of the Three Brothers in Palmyra (constructed 160 CE; Kraeling 1961–1962), the synagogue at Dura-Europos (mid-3rd century; see e.g., Kraeling 1956), and the mithraeum at Hawarte (4th century?; Gawlikowski 2007). In this period of transition from naturalism and illusionism to schematization and two-dimensionality, it is symptomatic that depictions of fauna and flora remain naturalistic far longer than the human figures. This may be naturally explained by the greater complexity of human representations, but also, in the case of Christian subjects, by the initial absence of iconographic models on which the artists could rely (Finney 1994: 222–228). This absence first led artists to experiment with such subjects, followed by the establishing of firm iconographic formulas. Meanwhile, nature-derived subjects had long been present in the iconographic repertoire and thus did not pose any difficulties to painters who continued to render them with ease and experience.

The origins of white backgrounds go back to Roman paintings where they were employed in lieu of polychrome backgrounds in rooms of lesser importance.[31] Reasons of both economy and shifts in taste account for their increasing popularity from the 2nd century CE onwards (seen, for example, in sepulchral art, whether in the Italian catacombs or the necropolises of the East; Dunand 1965; Barbet and Vibert-Guigue 1988–1994; Ling 1991: 188; Finney 1994: 191; Michaeli 2009). Rendering people, animals, or objects on white backgrounds disconnects them from any real environment and isolates them from one another. Coinciding with this phenomenon was the change in approach to landscape imagery taking place in the first half of the 3rd century. Landscapes in their classical form,[32] known from earlier painting styles, disappeared, becoming subordinate to various figural representations, such as depictions of hunts, agricultural work, or animals, depicted in their natural environment (Ling 1991: 183). Such an approach, assuming the supremacy of the animate elements of these scenes over the inanimate environment, encouraged the gradual shrinking and simplification of landscapes, eventually leading to their complete elimination. This, again, is illustrated well by a number of wall paintings from the necropolises of the Levant, where the "landscape" is confined to several schematic plants or is suggested by flowers scattered over solid white backgrounds (Dunand 1965; Barbet and Vibert-Guigue 1988–1994: 281; Michaeli 2009).

[31] Although they also appear in decorations of wealthy residences such as the Villa Poppea at Oplontis.

[32] That is, landscapes which may or may not tell a story or convey a message, in which the presence of figures is not obligatory. In Roman painting, these could be illusionistic garden compositions, waterside and rustic villas, sacro-idyllic landscapes, or mythological scenes set in a landscape. On landscape painting see Schefold 1960 (especially mythological landscapes); Peters 1963; Ling 1991: 142–153; Rouveret 2004.

With so few surviving examples of wall paintings from the 4th to the 6th centuries, it is not possible to track stylistic developments in Late Antique wall painting.[33] One wall painting from the Levant, preserved sufficiently well to enable a stylistic study, presents a group of three orans saints found in Caesarea Maritima, dated to the late 6th or early 7th century on stylistic and iconographic grounds (Avner 1999: 109–118). Tamar Avner, who studied the painting, pointed out a number of stylistic features which can also be observed in the wall paintings from Porphyreon. They include a frontal rendering of figures, placing them against a white background, ground strips under their feet, a limited use of dark contours, and the overall static character of the composition. At the same time, Avner noted certain characteristics that are not easily found in the Porphyreon wall paintings, namely, an impressionistic, somewhat "fuzzy" brushwork, rendering details by painterly means rather than outlines, anchoring the figures firmly to the ground, and a successful avoidance of stiffness. There may be several reasons behind these differences between the wall paintings from Porphyreon and Caesarea, the most obvious being related to the different skills of their creators and—as will be argued below—a somewhat earlier time of execution of the wall paintings from Porphyreon.

There are at least two reasons why wall mosaics regarded as comparanda should not be relied on too heavily or their stylistic idiosyncrasies applied uncritically in the search for further stylistic parallels for the wall paintings from Porphyreon. First, there is the obvious technical difference between the two media, which makes some of the criteria of stylistic comparisons, such as the use of shading, contours, fluency of form, and color range inapplicable. Second, there is the cost of wall mosaics which was, by default, an expensive medium, used to impress the beholder and to manifest wealth. For that reason, the backgrounds of wall mosaics were colorful, and the spaces filled with different motifs, which created opportunities for a wider array of colors to be used. The third problem with using wall mosaics as stylistic comparanda for the wall paintings from Porphyreon is their geographical distribution: the extant wall mosaics, scattered from East to West, show stylistic differences between regions, and are thus of limited value as comparative material (James 2017, especially 183–214; 215–253).

There are, however, two observations regarding wall mosaics that may be relevant to the discussion of the stylistic development of these wall paintings. The first is the schematization and rigidity of figures, which is seen in, for example, the Baptistery of San Giovanni in Fonte at Naples (second half of the 4th century). The second is the gradual reduction of elements of the landscape and a trend towards the use of solid backgrounds, oftentimes rendered in gold, such as in the mosaic of the Transfiguration from Sinai (between 548 and 565).

Of greater use for the stylistic study are the 5th- and 6th-century Syro-Palestinian figural floor mosaics, because they share with the Porphyrean wall paintings not only iconographic motifs but also certain stylistic traits. For example, there are the large 5th-century figural mosaics that depict freely dispersed fauna and flora.[34] The animals stand, walk, pursue each other or are hunted

[33] The problem applies also to early Christian panel paintings where stylistic and iconographic developments are reconstructed on the basis of a few surviving examples and literary sources (Mathews 2016, e.g., 9–27, 153ff.).

[34] For example, the mosaic depicting animals among trees in the "four-pillar chapel" adjacent to Basilica A at Resafa [see above, *Fig. 6-11*] (Ulbert 1986: 100–101, Pl. 39.1) that served as a parallel for the interpretation of the iconographic program of the Porphyrean basilica, the mosaic with the Good Shepherd/Orpheus surrounded by animals from the Villa at Jenah (late 5th century; Chéhab 1957: 64–73; 1959: Pl. XXXI), and the somewhat earlier Nilotic landscape from Tabgha/Heptapegon (second half of the 5th century; Michaeli 2013: 127–129, Fig. 10a).

against a white background, often set in an imbrication pattern, or against a background of *semis* of rosettes or flower buds (Dunbabin 2012: 179–180). The illusion of space in these scenes is minimal, the landscapes are limited to generic plants and trees, and in many cases there is no indication of a ground-line; all this brings to mind the white, abstract backgrounds of the figures in the paintings from Porphyreon and the minimalistic ground strips with generic plants shown growing from them. However, the figures in the Porphyrean wall paintings—with the few exceptions discussed above—seem to lack the naturalism of the figures depicted on these mosaics: the latter are often captured in complex poses, in motion, at times foreshortened, and are shaded to convey a sense of volume.

As argued by both Katherine Dunbabin and Rina Talgam, the 5th-century large "figured carpets" were characterized by a naturalism of figural depictions, but in the first decades of the 6th century this gave way to a trend to two-dimensionality and decorative schematization (Dunbabin 2012: 179–184, 194–199; Talgam 2014: 134–145). Indeed, in terms of the treatment of figures, the wall paintings from Porphyreon seem to have more in common with floor mosaics like the one in the Old Diakonikon on Mount Nebo (530) or in the Hippolytus Hall at Madaba (mid-6th century; Piccirillo 1997: Figs 3–6). There, the figures appear somewhat rigid and cartoon-like, even when they are shown moving. The prevailing views are either frontal or in profile, while the three-quarter view becomes rare and, when used, appears awkward and unconvincing. The two-dimensionality of the figures is further emphasized by dark contours. Shading, if present, is inconsistent and appears intuitive rather than derived from an observation of nature; foreshortening and anatomical details are generally neglected, as are the volume and weight of the figures. Most of these characteristics also apply to the wall paintings from Porphyreon, except, perhaps, for the contours which are not very marked in the Porphyreon material.

In view of the numerous iconographic parallels between the wall paintings from Porphyreon and Late Antique illuminated manuscripts, it is expedient to briefly comment on their stylistic relation. The three principal manuscripts referred to most frequently in the iconographic interpretation of the paintings are the Rabbula Gospels, the Syriac Bible of Paris, and the Abba Garima I and III. The Syriac Bible of Paris provided parallels chiefly for the geometric motifs occurring in the medallions enclosing jeweled crosses and for the frontally rendered figure in eastern-looking garments on *Cat. 86*, paralleled by the figure of Prophet Daniel from folio 186r. In turn, the Abba Garima and the Rabbula Gospels compare remarkably well with the wall paintings from Porphyreon in a number of ways. First, there are the various recurring geometric motifs visible on the headpieces of the canon tables. Next are the depictions of various species of birds which also appear in the wall paintings from Porphyreon (compared to just a few in the Syriac Bible of Paris). There is also the formula of peacocks facing each other and perched atop the arches of the headpieces, which is an excellent parallel for the peacock on *Cat. 94*.

Keeping this list of similarities in mind, one should now add some stylistic links with the Rabbula Gospels. Most of the surviving Late Antique manuscripts with figural decorations feature a "panel painting" style of illuminations, where an image is contained inside a rectangular frame or field (see, for example, Rosenthal 1972: 92–93, 98–99). Such treatment of images characterizes the Syriac Bible of Paris (late 6th century; Sörries 1991). In the Rossano Gospels, even though the images lack frames, they are nevertheless very self-contained and are arranged on the pages with discipline (6th century; Cavallo 1992). However, in the Rabbula Gospels, only the scenes of the

Designation of St Matthew (fol. 1r), the Crucifixion (fol. 13r), the Ascension (fol. 13v), the offering of the codex (fol. 14r), and the Pentecost (fol. 14v) are represented in the "panel-painting" manner (586; Bernabò 2008a: Pls I, XXV–XXVIII). The rest of the illuminations (21 folios, exclusive of two folios with the letter of Eusebius to Carpianus), whether featuring figural representations or the canon tables, are set against abstract, plain backgrounds and not confined to any boundaries. The architectural structures framing the canon tables are all floating in the air, except for a few set upon thin ground-lines. Likewise, the marginal figures and scenes seem to be randomly scattered without compositional connections, either among themselves or to the imaginary architecture of the arcades, a feature which is reminiscent of the tentative layout of the Porphyrean wall paintings [see above, ***Fig. 5-22***]. Furthermore, some of the figures stand on patches of green ground, while others float in the air. It would be somewhat far-fetched, but possible, to assume that this kind of illumination was related to wall paintings, just like the framed miniatures seem to be related to panel paintings. Arguing in favor of this interpretation is the employment of architectural framing consisting of columns and arches, reminiscent of certain features in churches.

Yet this is where the stylistic similarities between the Porphyrean wall paintings and the Rabbula Gospels seem to end. Other stylistic idiosyncrasies defined as typical of the wall paintings from Porphyreon, such as either frontal or profile view and a certain stiffness of the figures, flat treatment, schematization of details, lack of shading, and lack of a sense of three-dimensionality, do not apply as much to the miniatures in the Rabbula Gospels. The illuminations demonstrate a certain naturalism through the sense of movement of the figures, the different poses they are captured in, and the shading of their garments, which conveys a sense of volume. This naturalism, seen in the codex dated securely to 586, is in line with the revival of naturalism in Syro-Palestinian floor mosaics in the second half of the 6th century as noted by Talgam (2014: 145–155). The echo of this naturalism was also detected by Avner in the Caesarea wall painting of the three orans and, in consequence, allowed her to date the painting to the later 6th or beginning of the 7th century (Avner 1999: 118).

To sum up, despite certain stylistic discrepancies which may be related to different chronologies and authorships, the wall paintings from Porphyreon fit within the general stylistic trend observed in the Late Antique floor mosaics from Syro-Palestine and in the illuminated manuscripts. This point may seem rather obvious, as similar general phenomena and trends in the visual arts of Late Antiquity have been noted across various media (see e.g., Kitzinger 1995: especially 67–68), but it is worth articulating because the discouragingly few surviving wall paintings from the period have hitherto failed to illustrate such stylistic relations with mosaics and manuscripts. Floor mosaics and illuminated manuscripts facilitated the stylistic examination of the Porphyrean wall paintings, just as they facilitated the interpretation of particular motifs.

Such iconographic and stylistic links between the wall paintings, mosaics, and illuminations should not come as a surprise, because despite being entirely different media, they may have been perceived by the ancient viewers as three variations of painting. After all, they all operate with color and in two dimensions. Choricius expresses the notion in reference to mosaics when he claims that the Church of St Stephen at Gaza would be unanimously declared the "victor" among other shrines by connoisseurs of different artistic media, including "a connoisseur of painting, not only the kind that uses color, but also of mosaic which imitates the former" (*LM* II, 53; quoted after Mango 1986: 72).

6.4 Dating

Proposing a date for the execution of the wall paintings from Porphyreon is problematic for a number of reasons. Normally, one would refer to the available archaeological evidence: the dates provided by the mosaic inscriptions from the basilica, analyses of the architecture and construction phases, and an artistic characteristic of the paintings themselves. None of these criteria can be taken advantage of to the full in this case. The paintings are too fragmentary to support dating based solely on stylistic and iconographic grounds (which can be tricky even with well-preserved monuments). Construction phases are difficult to discern in both the basilica and the residential district, because of the poor condition of the architectural remains (save for the basilica's east wall) and the random and uncharacteristic building techniques employed in the houses. In addition, since all of the fragments were found in the tumble collapsed from the walls, any efforts at determining the original setting and linking execution to a given architectural phase are virtually impossible. Even so, a review of the available evidence can yet yield clues that can help to narrow down the time to which these paintings could be assigned.

Waliszewski chooses to consider the date of 477, appearing in an inscription set in the large mosaic found at the western end of the nave, as the date for the completion of the building of the basilica (Abou Diwan 2014: Figs 3–4) [see above, *Fig. 6-13*]. In a recent book, Hélou proposed a construction date for the basilica in the first half of the 4th century (2019: 90–91) in view of the similarities with some of the basilicas founded by Constantine the Great: considerable dimensions, only one, disproportionally small apse, and the presence of five aisles.[35] In the opinion of the present author, this last feature is a misinterpretation of the plan of the basilica excavated by Contenau, which Hélou accepts as being the same as the basilica excavated in 1987. The plan included in his report [see above, *Fig. 2-3*] shows four mosaic carpets and a paved nave which indeed at first sight might be read as five longitudinal divisions of the church. The walls, however, clearly indicated in black, reveal it as a three-aisled structure. Notwithstanding, Hélou considers the mosaics as belonging to later redecorations of the interior that likely occurred in a few separate phases.

Stratigraphic research outside the east wall of the basilica, as well as interrupted courses visible in the northern part of the east wall, indicate that at some point the northeastern corner of the basilica collapsed and was rebuilt, using most probably the same stones. In consequence of this reconstruction, the orientation of the walls was slightly changed; the eastern part of the northern aisle became wider, and the northeastern corner was cut by five degrees [see above, *Fig. 2-7*]. Also, it appears that the gallery above the northern aisle evidenced in the east wall by a series of sockets intended for mounting horizontal wooden beams, was not rebuilt after the collapse; no sockets were made in the reconstructed part of the wall. This points to a major rearrangement after the damage.

The partial destruction of the basilica could have been effected by a massive earthquake that hit Syro-Palestine on July 9, 551 (Guidoboni, Comastri, and Traina 1994: 332–336; Ambraseys 2009: 199–200). Its force is comparable to the earthquake that destroyed the cities of the Decapolis in 749. The epicenter was located off the Phoenician shore or inland, close to the coast; Beirut/

[35] Such a plan characterized the Lateran and St Peter's basilicas in Rome (Armstrong 1974: 6–7, 13; Mitchell 2017).

Berytus suffered extensive damages, including the destruction of the famous Law School, caused by the seismic shocks and a seismic sea wave which flooded the coast following the recession of the sea over several hours. The earthquake also caused immense damages in Tyre, Sidon, Byblos, and Tripolis, and the shock was felt as far south as Alexandria and as far north as Antioch. Porphyreon, located right on the coast just 30 km south of Beirut/Berytus, must have been severely affected as well (and likely flooded), hence the collapse and the subsequent reconstruction of the northeastern corner of the basilica. It cannot be excluded that the second dated mosaic from the basilica, which commemorates the paving of the baptistery in 565, was part of the post-disaster renovations (Abou Diwan 2014: Figs 1–2). However, it would mean that the re-mosaicing was done 14 years after the catastrophe, which seems rather late. Seven years earlier, in 558, another earthquake struck the Eastern Mediterranean (Ambraseys 2009: 211). It caused damages to buildings and loss of life in Antioch, Seleucia Pieria, and Anazarbus, but there are no records of it reaching farther south, so it is dubious whether it affected Porphyreon.[36] Another earthquake affecting Syria and Lebanon is said to have occurred in June of 565, but it is mentioned in only one source and could be spurious (Ambraseys 2009: 212). Therefore, the baptistery mosaic with the date 565 may be a late repair of the damages that occurred in 551, or it may have been an initiative independent of the earthquake damages. In view of apparent damages to the basilica in the mid-6th century, necessitating reconstruction work on the masonry and a repaving of (some of?) the floors, one is left with the uncertainty whether the surviving wall painting decoration should be associated with the pre-cataclysm decoration (likely dating to the last quarter of the 5th century on the grounds of the mosaic inscription from 477), or considered as new decoration introduced in the 560s or 570s following the presumed disaster? A third possibility, perhaps the most cautious and conservative of the three, assumes that some paintings pertained to the earlier decoration of the basilica, while others were executed later. Given the fact that plausibly only some parts of the basilica were damaged, and considering the stylistic differences between some of the painting fragments, this idea does not seem improbable.

No less ambiguous is the question of the dating of the wall paintings from the residential district. Each of the house complexes underwent several phases of architectural modifications, although the varying and mixed building techniques make these phases difficult to discern and date without, for example, thorough analyses of construction mortars. Stratigraphic probes dug in different rooms of the two residential sectors (D and E) have shown that an early phase of intensified construction occurred in the late 4th or early 5th century. Around a century later, in the late 5th or early 6th century, the inhabitants invested in a complex drainage system which covered a major part of Sector D. At that time, new floors seem to have been laid in some of the houses, and some structural modifications were made (Gwiazda and Waliszewski 2014: 52–53). These renovations may well have prompted the execution of new plasters and wall paintings.

Excavating the residential district, Saidah recorded evidence pertaining to an abrupt and probably violent end of the town: remains of charred wood in sockets in the walls where wooden beams were once installed, a thick layer of ash on the floors inside the rooms, and melted and deformed metal items amalgamated with pottery (Saidah 1977: 40). Without the documentation

[36] Guidoboni, Comastri, and Traina (1994) combine the records of this earthquake with an earthquake that shook Urfa/Edessa and Samosata, which they date to 570. Ambraseys (2009: 213) believes that these were separate cataclysms.

of the 1987 excavation in the basilica, it cannot be said whether any evidence of similar, possibly violent damage was discovered there. However, Contenau noted burnt patches on the mosaic floors in the church that he excavated (Contenau 1920: 296). For that matter, only two fragments of wall paintings, both from the basilica (*Cat. 215*, *270*), show a characteristic dark-gray discoloration caused by fire. The houses and basilica must have been abandoned sometime in the first half of the 7th century, since the latest coins are those of Heraclius (r. 610–641) (found in the residential district; Saidah 1977: 43).

Sudden destruction and abandonment of the town may have been caused by a natural disaster or by warfare. Both eventualities are equally probable in the early decades of the 7th century. First, the Persians raided the Eastern Mediterranean. It is unlikely that Porphyreon, set as it is in a bottle-neck passage between the mountains and the coast on one of the main coastal routes, would have been overlooked or spared by a passing hostile army. According to Christian sources, the Persians sacked the cities, slaughtering the population and leaving a trail of burning fires. Nevertheless, recent archaeological studies have suggested less actual damage to the material resources than the black propaganda of Late Antique writers insinuated (Magness 2011; Piccirillo 2011; Cameron 2012: 195). The next and unforeseen invader after the Persians (peace with the Persians was concluded in 629) were the Arabs, and again, the accounts of urban destruction and suffering of the local populations at the hands of the new enemy are not necessarily mirrored by archaeological discoveries and could well be exaggerated (Walmsley 2007: 45–47; Cameron 2012: 199–200; Avni 2014; also see Pentz 1992: 24–31). Assuming Porphyreon did not suffer from either of these two invasions, it could have succumbed to yet another earthquake, which took place allegedly between 613 and 622, but is poorly documented, being recorded in only one, much later source, *The Proofs of Prophethood*, by ʻAl Bayhaqi, the 11th-century Arab writer (Ambraseys 2009: 218). Another cataclysm was documented in 634, but again, besides some damage in Jerusalem, there is insufficient evidence to assume that it reached as far as the Phoenician coast (Ambraseys 2009: 219–220). In the light of the lack of evidence of other major natural disasters, it appears probable that Porphyreon was after all sacked and destroyed either by the Persians or by the Arabs. In either case, we may accept that it was abandoned sometime in the 630s or 640s.

The mosaic inscriptions from the basilica, the archaeological evidence, and the historical data on the sequence of earthquakes and war campaigns establish a general chronology of the two complexes with wall paintings in Porphyreon. It can be said with a measure of confidence that the wall paintings were created between the last quarter of the 5th century and the early 7th century, before some violent event brought Porphyreon to an end. Keeping this date range in mind, we could try to narrow it down on the grounds of the iconographic and stylistic idiosyncrasies of the wall paintings themselves, although using such criteria is problematic for at least two reasons. The principal and most obvious complication, compromising any general assessment, is the fragmentary condition of the paintings. Second and not the least is the fact that the iconographic and stylistic criteria used for dating the wall paintings come principally from the realm of floor mosaics, where only a limited number of floors is securely dated by inscriptions (Donceel-Voûte 1988: 469; Talgam 2014: 129–131). However, a few cautious observations can be made.

First, most of the comparanda, which turned out useful in the identification and interpretation of the depicted motifs, date from the 6th century. It is unlikely that the wall paintings would have been executed only shortly before the fall of the town, assuming it took place sometime between

the 620s and 640s. Therefore, placing them no later than in the 6th century seems legitimate also from the point of view of the archaeological evidence and site chronology. Furthermore, their iconography seems to conform to the character of wall decorations in the two churches in Gaza described by Choricius (dated to the 530s or 540s; Mango 1986: 60, 68).

Second, if the stylistic changes and developments characterizing the 6th-century floor mosaics are considered, the wall paintings could probably be anchored in the first half of the century on the basis of their rather advanced schematization, rigidness, and two-dimensional character, paralleled by the same phenomenon observed on floor mosaics from the same time (Dunbabin 2012: 179–184, 194–199; Talgam 2014: 134–145). Nevertheless, these particular criteria are tricky for at least three reasons: the uncertain dating of the mosaics, which are often themselves dated on the basis of parallels, the fragmentary state of the wall paintings from Porphyreon, and the fact that the paintings are not coherent in terms of their style and thus might have been executed at different times.

Finally, a closer look should be taken at a seemingly trivial but unusual decorative motif that occurs in the wall paintings (*Cat. 77*, *78*) and on the mosaic with lions and rams from Porphyreon, namely, the "gemstone" band [see above, *Figs 5-10*, *5-23*]. This motif is rare in comparison to other geometric motifs used in mosaic and manuscript decoration: only six (published) instances of floor mosaics from the Levant (excluding Porphyreon), and three examples of illuminated manuscripts. Four of these items have a secure date, whereas five are dated on stylistic grounds and archaeological evidence [*Table 6-3*].

Why this motif is so rare and why it pops up in such scattered locations throughout the Levant are questions that invite further research. For the moment, however, it can be said that it entered the repertory of geometric motifs sometime in the course of the 5th century, possibly towards its second half, and continued in use throughout the 6th century. From the point of view of the dating of the wall paintings from Porphyreon, the most compelling may be the presence of "gemstones" on mosaics of the two nearby churches at Khan Khaldé and Khaldé-Choueifat, two settlements located about 15 km from Porphyreon in the direction of Beirut/Berytus. The *terminus ante quem* for the lower church at Khan Khaldé is 503 or 506, which is the date when the mosaics in the upper basilica were laid. The construction of the basilica at Khaldé-Choueifat is dated to the late 5th century. The concentration of the "gemstones" motif in this area may indicate it as a hallmark of a local mosaic workshop or point to a mutual source of inspiration of mosaicists and painters, and thus, possibly, to a more or less contemporaneous time of execution. If so, the wall paintings could be placed sometime in the late 5th century, a time conforming to the date (477) of the laying of the earliest dated mosaic at Porphyreon.

However, "gemstones" appear on only two fragments of wall paintings, both of which belong to a set of fragments from the basilica showing a distinctive paint handling and style and thus not representative of the ensemble as a whole. As argued in *§ 6.3*, this group represents some of the finer artistic qualities to be seen among the entire assemblage of paintings and are the most naturalistic of all. Even though there are no means to prove it, it is tempting to imagine that these more refined paintings constituted part of the earlier decoration of the basilica. In addition, dating them to the late 5th century would be in line with the naturalism which can be seen on the 5th-century floor mosaics (e.g., the aforementioned pastoral mosaic from Jenah; the mosaic from Resafa) [see above, *Fig. 6-11*].

Table 6-3. Instances of the "gemstone" motif in Late Antique mosaics and illuminated manuscripts

Medium/context	Date
Floor mosaic in the southern aisle of the lower church at Khan Khaldé; on the frame of a rectangular panel with a depiction of vine scrolls (Duval and Caillet 1982: 326, 327, Fig. 10; Donceel-Voûte 1988: 386, Fig. 373) [see above, *Fig. 5-41*]	Mid 5th c.; before 503/506
Floor mosaic in the southern aisle of the church at Khaldé-Choueifat; on the frame of a medallion surrounding a depiction of a panther stepping over a fallen ox (Chéhab 1957: 114–116; 1959: Pl. 76.1; Donceel-Voûte 1988: 365, Fig. 348) [see above, *Fig. 5-24*]	Late 5th c.(?)
Floor mosaic outside the northern aisle of the Basilica of Chrysopolitissa at Nea Paphos (Michaelides 1987: 46–47; Pl. XXXIII.54; Guimier-Sorbets 2005–2006: Fig. 6)	5th/6th c.
Floor mosaic in a burial chamber adjacent to a basilica at Yeroskipou; on the frame of a medallion containing words from Psalm 117 (Michaelides 2004)	5th or 6th c.
Floor mosaic in the Church of Bishop John at Zizia (Piccirillo 2002: Phot. 9, 36–38)	560
Floor mosaic in the Chapel of the Martyr Theodore adjacent to the Cathedral at Madaba; on interlaced scuta (Piccirillo 1997: 117, Figs 99, 109)	562
Folios 3r and 10r of the Rabbula Gospels (Bernabò 2008a: Pls 5, 19) [see above, *Fig. 5-26*]	586
Folio 5r of the Rossano Gospels (Cavallo 1992: 25–26, Pl. 9) [see above, *Fig. 5-27*]	6th c.
Folio 25r of the Syriac Bible of Paris (Sörries 1991: 27, 62–63, Fig. 4)	Late 6th c.

After the partial destruction of the basilica around the mid-6th century or slightly later, a new set of paintings, likely different in style, could have been executed in place of the damaged ones (perhaps at the same time as the execution of the baptistery mosaic?). In effect, the interior of the basilica would have been decorated with a mix of original and new, post-destruction paintings, even if there is no surviving evidence of such coexistence of different-phase decoration: none of the painting fragments was keyed to apply a new layer of plaster, and none shows superimposed plasters or preserves a border between decorations in a distinct style. As for the residential district, execution of the wall paintings could have been connected with increased building activity (installing drainage, laying new floors) in the late 5th or early 6th century.

Given the number of pending questions regarding the chronology of Porphyreon: the time of execution of the other mosaics? their provenance? the contemporaneity of the wall paintings and mosaics? the reasons for the collapse of the northeastern corner of the basilica and its dating? the actual number of wall painting phases (more than one?)?, it is impossible to offer a more secure date or date range for the Porphyrean wall paintings. Nevertheless, their execution may be placed in the period from the late 5th century to the first half of the 6th century, with a possibility that some of them could have been executed sometime later, in the 560s or 570s, following an assumed natural disaster that could have destroyed some parts of the buildings.

CONCLUDING REMARKS

In bringing the wall paintings from Porphyreon out of more than 30 years of oblivion this research and conservation project has introduced them into the body of archeological evidence of Late Antique monumental art in the Eastern Mediterranean. Despite their fragmentary condition, which makes their study difficult, and the many still-pending questions regarding their interpretation, function, original contexts, authorship, and chronology, this book may be concluded with a few observations demonstrating that the wall paintings from Porphyreon are definitely a product of the Late Antique material and artistic culture.

The first observation is neither surprising nor original, as it concerns the perseverance of the Graeco-Roman legacy in the visual arts of Late Antiquity and its gradual adaptation to represent Christian content. In the Porphyrean paintings, this legacy reverberates in depictions of nature, in the selection of geometric motifs, and in compositional schemes. Intertwined with these motifs from a long-enduring pre-Christian tradition are new, explicitly Christian subjects, embodied by the sign of a cross and figures of saints. The *stephanostaurion*, a cross depicted inside a wreath or a stylized medallion, is a good example of the convergence of the new Christian symbols with preexisting iconographic formulas. In Antiquity, wreaths made of laurels were used to crown victors of athletic games and conquering soldiers, and were considered as a symbol of apotheosis in the funerary arts. Palm branches were assigned a similar meaning. Both symbols were adopted by the Christian iconographic language to demonstrate the triumph of Christianity over sin and death, which explains their popularity in funerary art. Depictions of crosses surrounded by laurel or palm branches became immensely popular, yet only one of the crosses (*Cat. 7*) at Porphyreon possibly represents such a scheme. Instead, Porphyrean crosses are enclosed in wreaths of dense, fruit-laden foliage or medallions with geometric designs. Both these designs are also descendent from the Graeco-Roman iconographic language. The primary source of inspiration for the former type seems to come from representations of garlands, which in pre-Christian art evoked associations with festivities and the bounty of the earth. Meanwhile, the medallions adorned with various geometric patterns derive from decorative frames enclosing imagines clipeatae and inscriptions present in Roman floor mosaics and wall paintings. Regardless of the source of iconographic inspiration, the principal objective of this aesthetic formula was established in Antiquity: its role was to glorify and draw attention to whatever was placed inside the wreath or medallion.

An original and characteristic element, the imitations of precious stones seem to hold a special place in the Late Antique repertoire of motifs. In Porphyreon, crosses are decorated with pearls and jewels and the latter are also an integral part of the "gemstone" motif. The taste for jewels and pearls seems to be of Eastern origin, seeing that embroidered and jeweled bands are characteristic features of Persian attire as observed, for example, in the wall paintings from the mithraeum at Hawarte (Gawlikowski 2007: 353, Col. Fig. 9). Nevertheless, the great popularity of precious stones and pearls in early Christian art might have been inspired by the description of celestial Jerusalem in the Book of Revelations (Flood 2001: 17–18, 25–27). According to the Scriptures, 12 gemstones decorate the 12 foundations of the city, each of the 12 gates is made of

a single pearl, and the streets are rendered in gold (Rev. 21:19–21). The splendor of jewels was associated, as expected, with the imperial court. Pearls, sapphires, and emeralds were reserved for the emperor and his family by the *Codex of Justinian* (529; Pace, Guido, and Radiciotti 2009: 28, note 5). This did not prevent Late Antique artists from imitating all sorts of jewels and pearls in the frames, in depictions of crosses, and heavenly thrones rendered in tesserae,[1] weaving,[2] and miniature[3] and monumental painting.[4] This grand display of luxury finds its full expression in the splendor of Umayyad wall mosaics: in the Great Mosque at Damascus, where golden chains with pendant jewels and pearls adorn celestial architecture (Flood 2001: 15–16, 27–29) and in the Dome of the Rock where jewels and pearls not only stud the *kantharoi*, tiaras, and winged motifs, but also appear on purely organic forms, such as vines and palm trees (Rosen-Ayalon 1989: Figs 31, 42–43, Col. Pls I–XVI).

This passion for jewels, lavish ornaments, colors, and brilliance is referred to as the "jeweled style" of Late Antiquity. The term was first coined in reference to Late Antique poetry by Michael Roberts (1989) but, as demonstrated by the author himself, the jeweled style in poetry derived from and was inspired by the visual arts (Roberts 1989: 66–121; also see Bolman 2016b; Williams 2018). It is not just vivid and extravagant representations of (or, in poetry, references to) precious stones and shining metals, but a broader aesthetic phenomenon that in compositional terms favors the "densely textured play of repetition and variation" (Roberts 1989: 38), fragmentation, and isolation of particular representations (or words) within larger compositions. The state of preservation of the wall paintings from Porphyreon, fragmented, incomplete, and detached from their original context, does not permit a consideration of whether the arrangement and distribution of particular motifs on the walls of the basilica and the houses reflected the compositional aesthetics of the "jeweled style". Nevertheless, a few features seem to hint at it. First, there is the multitude and repetition of depictions of jeweled crosses varying in size, colors, and patterning of the medallions. Next, there is the isolation of particular depictions (e.g., no clear evidence of "connectors" between images of particular animals). Third, there is the presumed use of bands of geometric patterns to delineate and emphasize architectural divisions, the intention being possibly "to break up a composition into self-contained, highly elaborated panels or registers and to admire the play of brilliance and color between compositional units" (Roberts 1989: 112).

[1] Nearly every wall mosaic from the 5th–7th centuries features a jeweled band, usually composed of alternating oval and rectangular gemstones set against a red background. An early example of jeweled bands delineating architectural features is found in the Baptistery of San Giovanni in Fonte at Naples, where these bands run along the edges of arched niches (second half of the 4th century; Ferri 2013: 19, Pl. 8). Jeweled bands appear also on the frames of floor mosaics (Donceel-Voûte 1988: 448). On jewels and jewelry on the mosaics of Antioch see Pedone (2012, especially 399–402, Fig. 10). The rare "gemstone" band featured on several Late Antique floor mosaics was likely inspired by jewelry (Guimier-Sorbets 2005–2006).

[2] For example, jeweled crosses are reproduced on a Coptic liturgical veil (Cabrera et al. 2009: 94–95, Figs 11, 12a) and a sanctuary curtain (Jensen: 2017: 98, Fig. 5.1).

[3] A Virgin and Child is depicted on a jeweled throne and against jewel-studded architecture on a late-6th- or early-7th-century folio inserted in the Etchmiadzin Gospels (McKenzie and Watson 2016: 105, Fig. 157). The "gemstone" motif appears in illuminations of the Rabbula Gospels (fols 3r and 10r), Rossano Gospels (fol. 5v), and the Syriac Bible of Paris (fol. 25) (see above, *§ 5.3.2*).

[4] The Virgin and Child from a wall painting in a house on Kom el-Dikka in Alexandria is seated on a jeweled throne (Rodziewicz 1984: 199, 201, Figs 232, 236). From Caesarea Maritima come depictions of jeweled crosses (Patrich 1999: 78, Fig. 9).

Finally, the wall paintings from Porphyreon and the examples cited as parallels illustrate the phenomenon of cross-fertilization in the various media of Late Antique art. The strongest iconographic and compositional links are, unsurprisingly, between the wall paintings and floor mosaics, both forms of decoration belonging to the realm of monumental art. The two also have a long history of mutually-inspired development. In the Roman mosaics, emblemata executed in *opus vermiculatum* aimed to imitate painting (Ling 1991: 219, Figs 235–236; Dunbabin 2012: 29). Several centuries later, Choricius still referred to mosaics as imitative of the art of painting (*LM* II, 53). Meanwhile, the appearance in wall painting of motifs typical of floor mosaics, such as a guilloche or cable patterns, and the fact that in some cases the paintings imitated the texture of mosaic cubes (Barbet 1995: 48), corroborates the flow of artistic ideas in the opposite direction as well, that is to say, from mosaics to paintings.

Even more compelling is the phenomenon of patterns being transmitted between monumental art and miniature painting, which is evidenced by the recurrence of similar compositional formulas and decorative patterns on headpieces of illuminated manuscripts, wall and floor mosaics, and wall paintings. This is hardly surprising if we put aside the obvious technical differences and look at all of these media (including mosaics) as different forms of "painting"; after all, they all operate with color and deal with two-dimensional surfaces. In addition, it cannot be excluded that illustrations from scrolls and codices could have been used as models for artists working in the large scale, a notion suggested in reference to biblical scenes in catacomb painting (Tronzo 1986: 28–29).[5] A legendary account of the life of St Pancratius, dated to the 7th century, illustrates such a practice (*Vita S. Pancratii*). It relates how St Peter, who was building a church at Pontus, instructed a painter to prepare portraits of himself, Pancratius, and Christ, and a set of images depicting the entire "picture-story" of the life of Christ. The pictures were made on parchment and in encaustic technique on panels, and they served as models to decorate the church. Later on, Pancratius and another preacher embarked on a journey to evangelize the West and took with them, among other items, "two volumes of the divine picture-stories containing the decoration of the church" to be used as models in the churches the two men were to build in the West (quoted after Mango 1986: 137).[6] This story and the affinities between monumental and miniature art open a research issue which exceeds the scope of this study, but is fascinating on its own, namely, the means of dissemination of iconographic models, the existence of model books, and the itinerancy of craftspeople.

Besides these general characteristics which define them as a product of Late Antique artistic and material culture, the Porphyreon assemblage enhances the understanding of the Late Antique art of wall painting in a number of ways. There is no other collection of pre-iconoclastic wall paintings from the Eastern Mediterranean which represents such a variety of subjects and patterns decorating both ecclesiastical and domestic interiors. Remains of wall paintings found in the debris of a number of Late Antique churches are usually too fragmentary to invite any comment on their appearance or contents. A few better-preserved compositions feature only a single representation or

[5] However, Thomas Stevenson (1983: 109) argues that the costly illuminated books could not be used directly by the artists as a reference because they would wear quickly under such conditions. It is tenable that artists would have produced and circulated working copy-books with reference images.

[6] The volumes were likely made of parchment since the author speaks of "opening" or "unfolding" them. In another passage, he uses the expression *pinakes chartôoi*, pictures on parchment (Mango 1986: 138, note 78).

a single subject (e.g., figural depictions from Caesarea Maritima; birds adoring a cross from Zahrani), hence they represent only a small slice of the possible iconographic programs of the early Christian churches, the walls of which, as we learn from the texts of Nilus, Choricius, and other early Christian writers, could accommodate and combine a variety of subjects. Moreover, the wall paintings from Porphyreon are a unique relic of times when representations of nature were a frequent and welcome subject in sacred decorations, a phenomenon illustrated thus far chiefly by floor mosaics. As said before, images of nature were consistently expelled from iconographic programs of churches following the age of iconoclasm.

Archeological evidence and textual sources on wall painting decoration in domestic interiors are even more rudimentary than in the case of church buildings. The lack of material evidence may be attributed to the fact that the simple construction techniques oftentimes applied to common domestic architecture of the period in question affected its durability and chances of survival. Therefore, save for the depiction from the house at Kom el-Dikka, the wall paintings from the Porphyrean houses are probably the first finds of their kind.[7]

The wall decoration from residential Porphyreon displayed a variety of subjects and manifested in a number of ways the Christian faith of the inhabitants. Their religious content could prompt associations with a religious community of some kind (a monastery as suspected by Saidah, or a pilgrims' stop?), but while this is not impossible, the buildings show no architectural or functional features (e.g., cells, small chapels for private devotion, communal spaces) that could identify them as a monastic or pilgrims' compound and only one house (Complex 8) yielded a few liturgical objects. Generally, the layout and architectural features of the houses are typical of an ordinary settlement on the Phoenician coast (Waliszewski and Burdajewicz 2019). Furthermore, in the light of the omnipresence of religious images and symbols in Late Antique cities, towns, and villages attested in historical sources, as well as by the material evidence (textiles, garments, personal objects), the religious subjects of the wall paintings should not be considered as an indication of the religious character of the spaces they decorated.

The spatial distribution of the wall paintings in the houses of Porphyreon point to a very different organization of domestic spaces compared to Roman-period dwellings. Roman houses would have the ground-level rooms of a semi-public character more decorated, while at Porphyreon it was the upper-floor rooms that received a more elaborate and colorful decoration of paintings on the walls and mosaics on the floors. The only decoration in the ground-level rooms were symbols of the cross and apotropaic and laudatory inscriptions, introduced in transitional spaces to catch the attention of visitors. Such a vertical orientation of domestic architecture, involving functional ground-level rooms and a decorated *piano nobile* with living quarters and possibly also reception suites, was observed in a number of Late Antique houses, in Egypt and Syria (Ellis 2000: 89–97; Polci 2003).

Another point of particular interest with regard to the wall paintings from both the houses and the basilica is that they come from a middle-sized settlement of a mixed rural and urban character. Even in the Roman-period Levant, which is generally more abundant in relics of wall

[7] There are also the unique wall paintings from a house at Amheida in Dakhlah Oasis, yet their somewhat earlier date (approximately mid-4th century) and mythological subject matter places them within the realm of Graeco-Roman art and iconography in Egypt (McFadden 2014; 2016).

paintings than the Late Antique period, the majority of remains of non-sepulchral decoration comes from palaces, luxurious residences, temples, or public buildings. The extent to which average houses would be adorned with wall paintings is unknown. Meanwhile, Porphyreon gives us a glance of what some of the Late Antique dwellings could have looked like in a settlement probably neither large nor small, neither rich nor poor. The same applies to the basilica, the decoration of which seems to represent a decent yet not masterful level of artistry and craftsmanship. While the extant wall mosaics from the East or Italy show the splendor of imperial or other prominent commissions, the wall paintings from the basilica at Porphyreon are more likely to reflect decorations of common type and quality.

Finally, there is the much-underexplored subject of the means and materials of Late Antique wall paintings. Fragments of painted plaster are a relatively common find in Late Antique structures, especially in churches, yet they rarely spark scholarly interest due to their usually poor condition of preservation and visibly inferior quality in relation to their Roman-period predecessors. Consequently, our understanding of the changes which occurred in the craft of wall painting between the Roman and the post-iconoclastic period is rudimentary. The fact that the wall paintings from Porphyreon survived on their original supports and in a significant number allowed a study of all of their constituent layers, making it possible to follow the entire process of their execution, from the preparation of the substrates through the application of the final touches of paint. Indeed, the results presented here can be said to be the first such comprehensive study of the technique of execution of Late Antique wall paintings from the Levant.

The results of the archaeometric study demonstrated the use of common raw materials in the execution of these wall paintings, both for the preparation of mortars and plasters (lime, local mineral aggregates) and for the painting (a common set of pigments). Noteworthy among the identified pigments is the celadonite-based green earth, a mineral of which the closest deposits are found in Cyprus. While it was previously identified in wall paintings of the Roman period in Syro-Palestine, there were no studies attesting its use in Late Antiquity. The presence of celadonite in Porphyreon testifies to its continued import.

Examination of the mineral substrates of the paintings and of the painting technique clearly revealed a simplification of the process in comparison with Roman-period execution techniques. Yet there is a clear consistency in how the raw materials were prepared and applied, indicating that the artists and craftsmen working at Porphyreon had their own know-how and established procedures that they adhered to. This, in turn, proves that the technique of Late Antique wall painters was not as erratic and poor as it may seem at first sight when juxtaposed with the refined techniques of execution of the Roman-period wall paintings.

The research and conservation project on wall paintings from Porphyreon was concluded in September 2019. However, it is the author's hope that through this publication the wall paintings will contribute to and deepen a discussion of this sorely underexplored subject—the Late Antique wall paintings from the Eastern Mediterranean and their particular role as descendants of Roman painting and forerunners of Byzantine art. The case of the wall paintings from Porphyreon shows that our knowledge of this fragile and underrepresented discipline of Late Antique monumental art will have to be built from fragments.

CATALOG

NOTES ON THE CONTENTS OF THE CATALOG

The Catalog presents all fragments of wall paintings covered by the present study. The catalog entries are composed of an identification of the motif or subject, a brief characterization of the technique of execution of the given fragment, a description of its condition prior to the conservation works, and a list of conducted treatments. For a broader discussion on any of these subjects, the reader should refer to appropriate chapters.

The Catalog is organized according to iconographic themes described in Chapter 5, regardless of when and in which sector of the site the given fragment was discovered. Such an arrangement facilitates comparison of similar motifs coming from the basilica and the residential district. It is also justified if we consider certain ambiguity regarding the find-spots of some of the fragments (for example, *Cat. 108*, first discovered by Roger Saidah in 1975 and then rediscovered in 1987). Nevertheless, each catalog entry contains information on the alleged finding location of the given fragment.

The catalog numbers are accompanied by the original inventory number assigned either by the DGA (five-digit numbers) or by the PCMA-DGA expedition. Representations composed of several fragments are found under one catalog entry, thus the number of catalog entries does not equal the number of fragments discovered during subsequent campaigns of works. With the exception of *Cat. 1*, the paintings preserved *in situ* and the paintings documented only on the slides of Saidah have only catalog numbers.

Each catalog entry is supplemented by a photograph of the presented fragment(s). Except for the color slides from the excavations by Saidah in 1975, which show paintings that are now missing, the images included in the catalog are the most recent photographs taken after the completion of conservation treatments. When necessary, additional photographs are included. For example, in the cases of fragments that have significantly deteriorated since the discovery, a photograph taken after the discovery is provided for reference. In addition, illustrations in Chapters 3–4 show specific technical features or conservation issues related to some of the fragments. In the case of the representations that could not be identified and thus, their orientation is unknown, expressions such as “the upper left corner” refer to the orientation of the fragment on the photograph.

Cat. No. *Inv. No.* – *Sample No.*	*Representation* Identification of motif/subject	PHOTO CORRESPONDING TO CONDITION; ADDITIONAL PHOTOS SHOW CONDITION AT THE TIME OF DISCOVERY, CLOSE-UPS OR OTHER STRUCTURAL DETAILS
Fig. in the text	*Provenance* Basilica / Residential district	*Discovery / transport to Beiteddine*
Stone	Dimensions; material. *Condition*:	
Mortar/plaster	Type and thickness. *Condition*:	
Paint layer	Build-up and paint handling. *Condition*:	
Treatment	Listed treatments.	

CATALOG

	1–29	Simple red crosses
	30–43	Jeweled crosses without medallions or too fragmentary to determine whether they were enclosed in medallions
	44–75	Jeweled crosses depicted inside medallions and fragments of the medallions
	76–83	Geometric motifs
	84–93	Human figures
	94–108	Animals: birds
	109	Animals: a fish
	110–121	Animals: beasts
	122–127	Fragments possibly pertaining to representations of animals
	128–149	Vegetal motifs: green plants and red flowers
	150–161	Vegetal motifs: fruit trees and foliage
	162–164	Vegetal motifs: vegetal scrolls(?)
	165–168	Vegetal motifs: red vegetal motifs
	169–178	Inhabited scrolls
	179–186	Monochrome genre(?) scenes
	187–212	Inscriptions
	213–287	Unidentified motifs and illegible fragments



East wall of Room E4, showing southern pilaster with the painting of a cross; the fill was not explored to the floor (orthophoto after discovery, 2013); bottom left, close-up

Cat. 1

Inv. No.
JY9WP13

Representation
Simple red cross; trefoil florets at the intersection of its members; horizontal member 42 cm

Provenance
Residential district (Sector E)

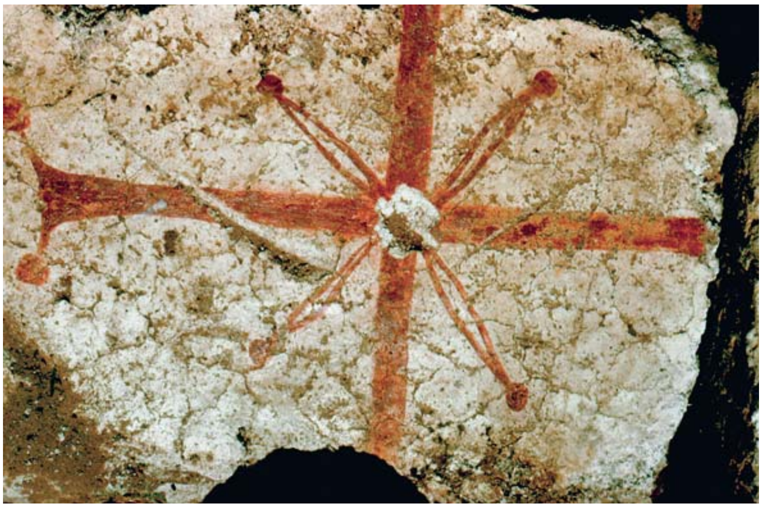
Discovery / transport to Beiteddine
2013 / –

Cat. 2, 3



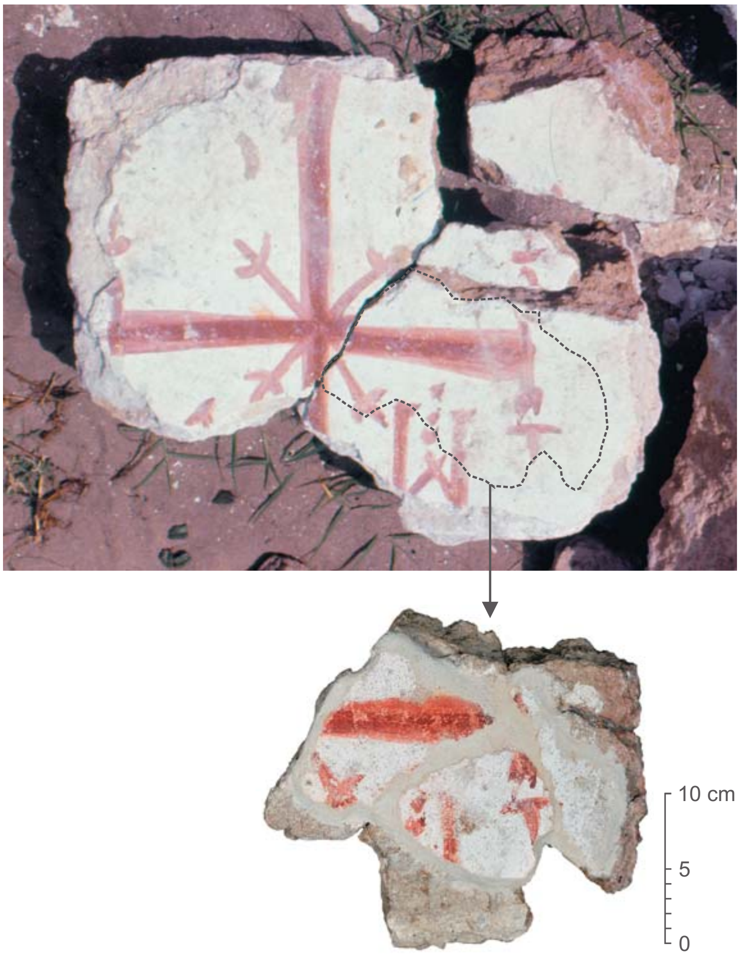
After discovery (1975)

Cat. 2	*Representation*	
Inv. No.	Simple red cross with *alpha* and *omega*; trefoil florets at the intersection of its members	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –



After discovery (1975)

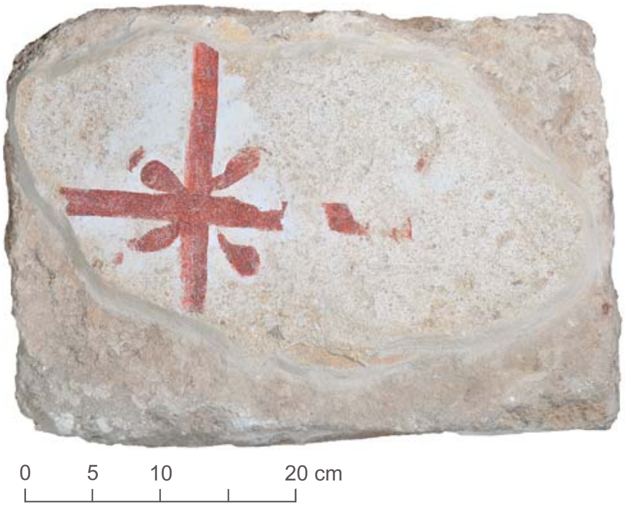
Cat. 3	*Representation*	
Inv. No.	Simple red cross with decorative knobs at the terminals; diagonal rays emanating from the intersection of its members	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –



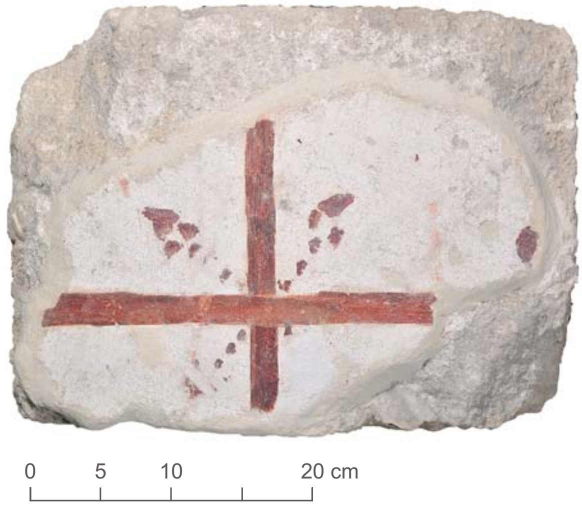
After discovery (1975); bottom, rediscovered fragment of the original block after treatment (2018)

Cat. 4 *Inv. No.* 98574	*Representation* Fragment of a simple red cross with *alpha* and *omega*; trefoil florets at the intersection of its members	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / about 1987
Stone	Entry refers to fragment rediscovered in 1987 (DGA Inv. No. 98574) 22 × 25 (face) × 8 cm; fragment of an ashlar. *Condition*: broken into four parts probably during storage in Beiteddine (only one fragment has an inventory number); back side trimmed.	
Mortar/plaster	Type 2 mortar visible only on the left and bottom sides of the fragment, in the cavities of the stone. Plaster 5–10 mm thick; directly on stone. *Condition*: good overall; granular disintegration of plaster.	
Paint layer	Relatively thin paint applied in one layer with quick, fluent brushstrokes. Drips of paint on the right-hand side of the fragment. *Condition*: good overall; slightly powdery; surface grime; coated with dull, grayish varnish.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; reassembling stone fragments; application of mortar fills; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 5, 6



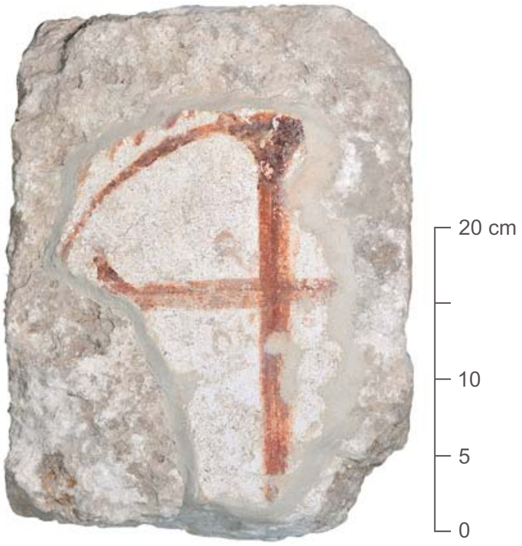
After treatment (2019) *Cat. 5*



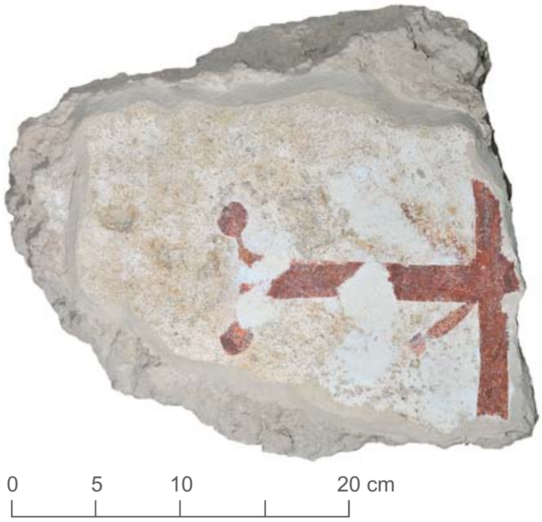
After treatment (2019) *Cat. 6*

Cat. 5 *Inv. No.* –	*Representation* Simple red crosss	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	32 × 45 (face) × 16 cm; well-dressed ashlar; porous stone. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar below the plaster and on the sides of the ashlar. Plaster 8 mm thick. *Condition*: surface pitted and abraded, abrasions appear to be recent; granular disintegration of plaster.	
Paint layer	Red paint applied in one, thick layer. *Condition*: good overall save for the abrasions; surface grime; glossy residues of varnish.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.	

Cat. 6 *Inv. No.* –	*Representation* Simple red cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	30 × 41 (face) × 18 cm; well-dressed ashlar. *Condition*: good overall; one corner missing.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 8–12 mm thick. *Condition*: shallow surface losses of plaster, gouges, and abrasions; granular disintegration of plaster.	
Paint layer	Thick red paint applied in one layer. *Condition*: good overall; slightly powdery; surface grime; glossy residues of varnish.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	



After treatment (2018) *Cat. 7*



After treatment (2019) *Cat. 8*

Cat. 7

Inv. No.
JY3WP

Representation
Simple red cross in a wreath

Provenance
Residential district

Discovery / transport to Beiteddine
1975 and again in 2000s / 2016

Stone	34 × 26 (face) × 18 cm; well-dressed ashlar. *Condition*: good overall; one corner missing, covered with mortar, indicating damage prior to use in construction.
Mortar/plaster	Type 2 mortar on the sides and partly underneath the plaster. Plaster 7–9 mm thick. *Condition*: minor shallow losses and abrasions; granular disintegration of plaster.
Paint layer	Thick red paint applied in one layer; visible brushwork. *Condition*: partly abraded; some small losses scattered throughout; firm surface grime; thick, yellowed, matte varnish.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.

Cat. 8

Inv. No.
97010

Fig. 4-31

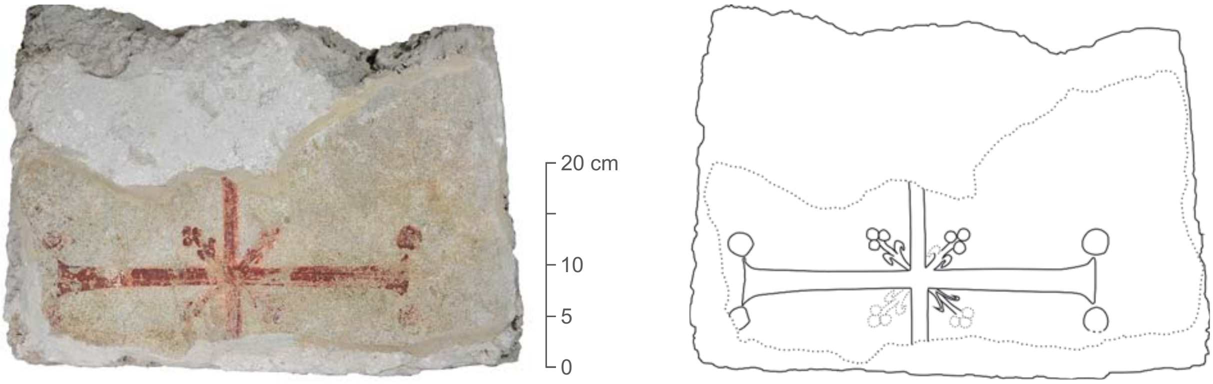
Representation
Simple red cross

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	30 × 26 (face) × 7 cm; rough, porous stone. *Condition*: back side trimmed; irregular shape; old breaks.
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 7–9 mm thick. *Condition*: rough, abraded surface; shallow losses; adhesion slightly weakened along the perimeter of the plaster; granular disintegration of plaster.
Paint layer	Red paint applied in one layer, originally thick. *Condition*: abraded surface; extensive chipping; thick coat of yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.

Cat. 9, 10



After treatment (2018) and tracing

Cat. 9 *Inv. No.* 98545 *Fig. 5-1*	*Representation* Simple red cross; trefoil florets at the intersection of its members	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 50 (face) × 11 cm; roughly dressed ashlar; irregular upper edge. *Condition*: back side trimmed; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the entire face of the ashlar. Plaster 10–12 mm thick. *Condition*: rough and pitted surface; granular disintegration of plaster; greenish discoloration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: abraded along with the plaster; slightly powdery; firm surface grime; remains of matte, yellowed varnish.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer. Varnish could not be removed entirely due to its adherence to the rough, abraded plaster surface.	



After discovery (1975)

Cat. 10 *Inv. No.* –	*Representation* Simple red cross with *alpha* and *omega*, adored by a red bird; bird very similar to that on *Cat. 105*	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –



After treatment (2019)

Cat. 11 *Inv. No.* JY11WP13	*Representation* Simple red cross with *alpha* and *omega*	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	27 × 38 (face) × 14 cm; roughly dressed ashlar. *Condition*: good overall.	
Mortar/plaster	Type 1 mortar on the sides; Type 2 mortar on the face, underneath the plaster. Plaster 8–10 mm thick. *Condition*: abrasion and pitting in the upper part; granular disintegration of plaster.	
Paint layer	Thick red paint; executed with quick brushstrokes; streak of paint below the letter *alpha*. *Condition*: abraded; numerous losses; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

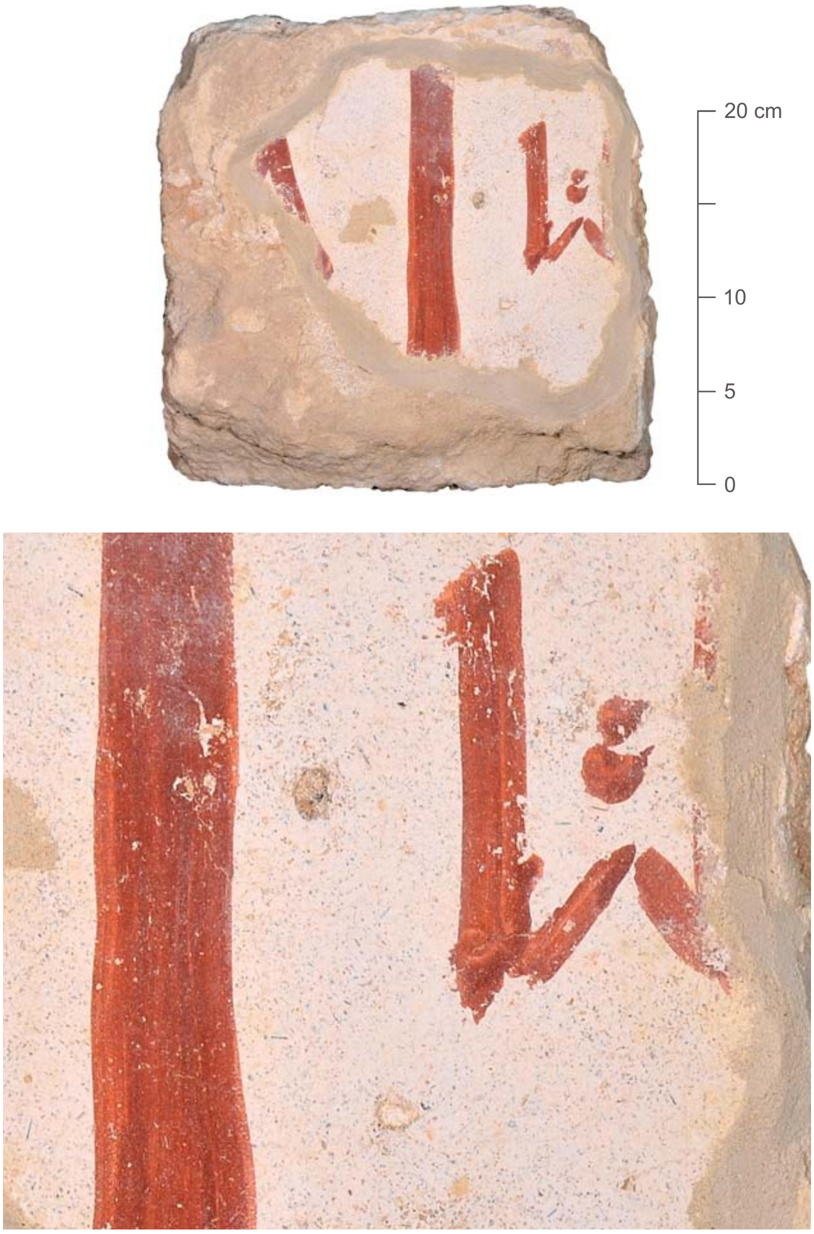
Cat. 12





After treatment (2017); top, after discovery (2010)

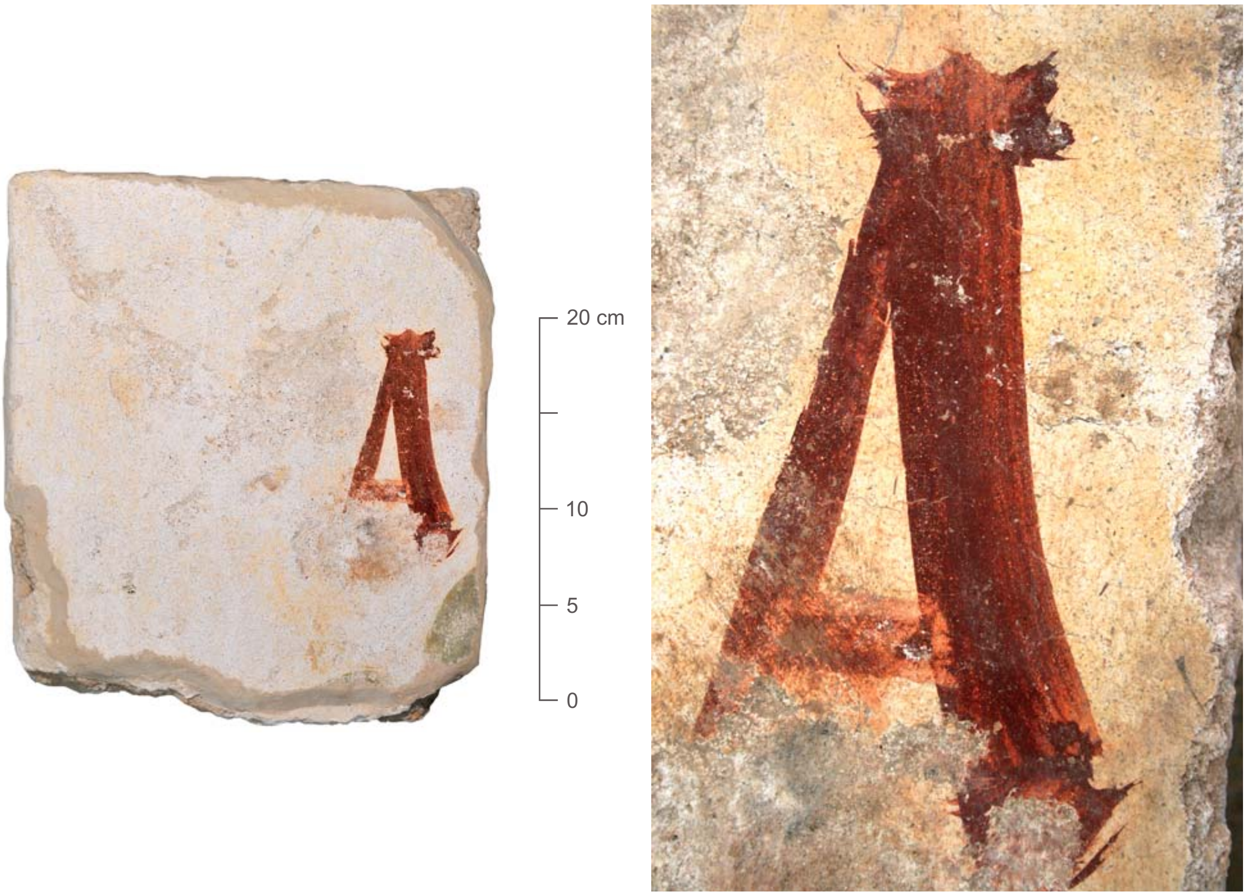
Cat. 12 *Inv. No.* JY76WP	*Representation* Simple red cross with *alpha* and *omega*	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	31 × 36 (face) × 16 cm; well-dressed ashlar. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Two layers of plaster with similar composition; the upper layer 4–5 mm thick, the lower layer very thin, 2–3 mm. *Condition*: deep losses and some abrasion; poor adhesion; granular disintegration of plaster; the preserved patch of plaster was larger at the time of discovery.	
Paint layer	Red paint applied in one layer. *Condition*: worn out and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017); bottom, detail of brushwork *Cat. 13*

Cat. 13 *Inv. No.* 98537	*Representation* Simple red cross with *alpha* and *omega*	
Fig. 3-23	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	26 × 26 (face) × 14 cm; well-dressed ashlar. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar remains on the face and sides of the ashlar. Plaster 10–12 mm thick. *Condition*: fairly good; small abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: overall well-preserved, although powdery and sensitive.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

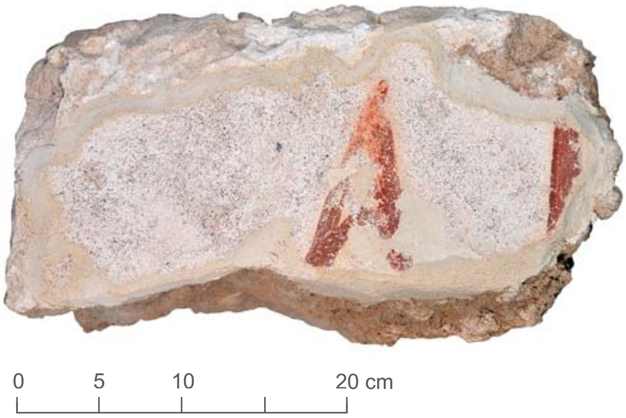
Cat. 14



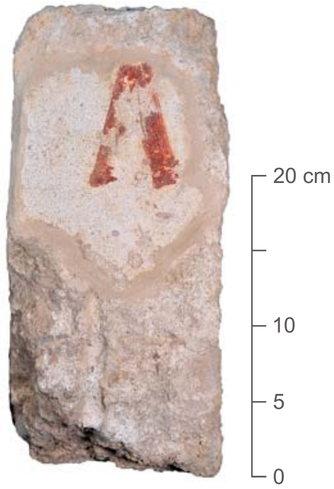
After treatment (2018); right, detail of brushwork before removal of yellowed varnish (2015) *Cat. 14*

Cat. 14 *Inv. No.* 97105 *Fig. 6-8*	*Representation* Letter *alpha*, most likely accompanying a simple red cross; green leaf(?) below and to the right of the letter	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 25 (face) × 7 cm; small, well-dressed ashlar. *Condition*: back side trimmed; otherwise good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 7–10 mm thick, even; present on the face and left side of the ashlar. *Condition*: good overall; granular disintegration of plaster, shallow losses, and abrasions.	
Paint layer	Thick red paint applied with broad, confident brushstrokes. *Condition*: good overall; surface grime; thin, yellowed varnish.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 15, 16



After treatment (2017) *Cat. 15*



After treatment (2017) *Cat. 16*

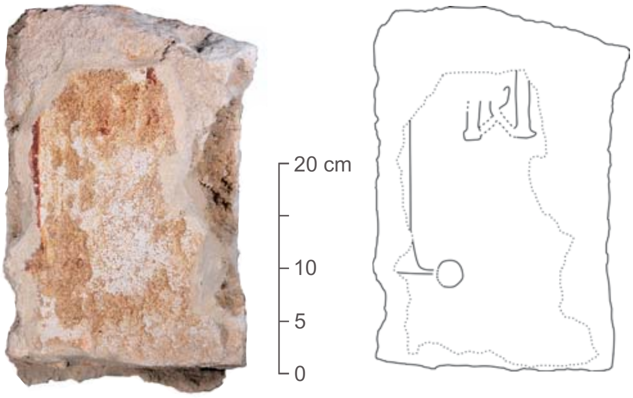
Cat. 15 *Inv. No.* JY6WP12	*Representation* Letter *alpha*, left of the vertical member of a simple red cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	18 × 36 (face) × 17 cm; fragment of an ashlar; dressed face and sides; shapeless back. *Condition*: two sides broken, fresh breaks; only the upper left corner original.	
Mortar/plaster	Type 2 mortar underneath the plaster and in the cavities of the stone. Plaster 5–6 mm thick. *Condition*: minor surface losses and abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer, originally thick. *Condition*: numerous abrasions and losses; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 16 *Inv. No.* JY11WP12	*Representation* Letter *alpha*, left of the vertical member of a simple red cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	31 × 15 (face) × 38 cm; well-dressed header. *Condition*: corner broken off from the back side; otherwise in good condition.	
Mortar/plaster	Type 2 mortar remains on the sides. Plaster 8–10 mm thick; directly on stone. *Condition*: losses and abrasions all over the surface, including one fresh-looking loss in the letter *alpha*; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: poorly preserved; abraded; powdery; surface very grimy.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 17, 18



After discovery (1975) *Cat. 17*



After treatment (2017) and tracing *Cat. 18*

Cat. 17

Inv. No.
–

Representation
Letter *omega*, right of the vertical member of a simple red cross

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –

Cat. 18

Inv. No.
98560

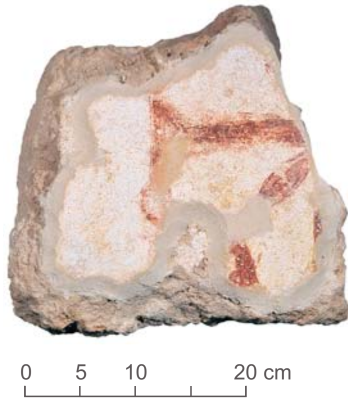
Representation
Letter *omega*, right of the vertical member of a simple red cross

Provenance	*Discovery / transport to Beiteddine*
Basilica	1987 / about 1987

Stone	34 × 21 (face) × 21 cm; roughly rectangular shape. *Condition*: back side trimmed and partly cut on the bottom; some chipping.
Mortar/plaster	Type 2 mortar underneath the plaster and on all sides of the ashlar. Plaster 5–8 mm thick. *Condition*: severely abraded and pitted; granular disintegration of plaster.
Paint layer	Red paint applied in one layer. *Condition*: poorly preserved; abraded; thick, yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; partial removal of varnish (complete removal impossible in the rough, abraded areas).



After treatment (2018) *Cat. 19*

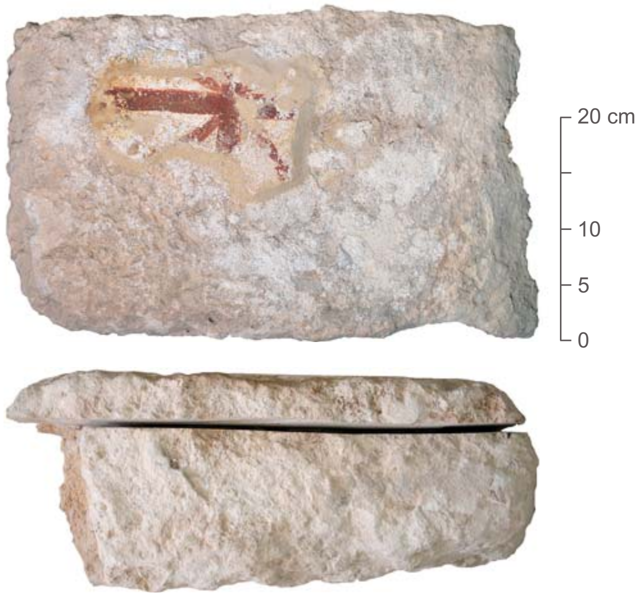


After treatment (2017) *Cat. 20*

Cat. 19 *Inv. No.* 98561	*Representation* Letter *omega* right of the vertical member of a simple red cross	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	37 × 52 (face) × 14 cm; regular, well-dressed ashlar. *Condition*: back side trimmed; lower left corner missing, fresh break.	
Mortar/plaster	Type 2 mortar on most of the face and on the sides. Plaster 5–7 mm thick. *Condition*: deep gouges and abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied in one thick layer. *Condition*: yellowed varnish; sensitive and powdery where not coated with varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

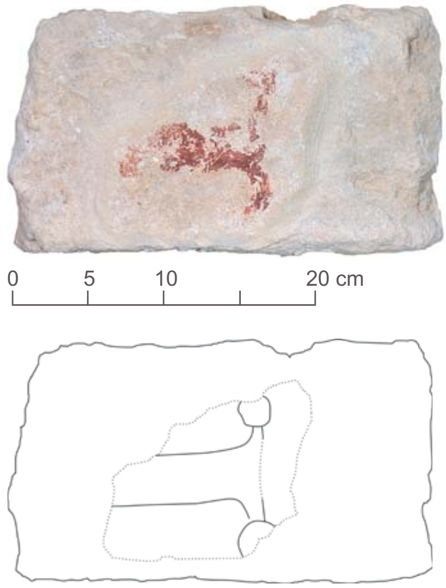
Cat. 20 *Inv. No.* 98524	*Representation* Simple red cross; diagonal rays emanating from the intersection of its members; a fragment of the letter *alpha* at the bottom edge(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 29 (face) × 15 cm; fragment of a roughly dressed ashlar. *Condition*: broken on two sides; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 7–9 mm thick. *Condition*: relatively good, some losses and abrasions along the perimeter of the plaster; granular disintegration of plaster.	
Paint layer	Dark red paint applied in one layer; contours blurred due to loss of cohesion of the paint. *Condition*: powdery, sensitive; abraded; surface grime; yellowed varnish appears on a small part of the plaster.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; removal of varnish.	

Cat. 21, 22



After treatment (2017) *Cat. 21*

Bottom, unfinished cut made on the bottom side, about 6 cm from the face of the ashlar (shown in photo at top)



After treatment (2017) *Cat. 22*

Cat. 21

Inv. No. 98489

Representation
Simple red cross; diagonal rays emanating from the intersection of its members

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	30 × 47 (face) × 20 cm; large, relatively regular ashlar. *Condition*: unfinished cut made with an angle grinder; fragment broken off at back during the cutting.
Mortar/plaster	Type 2 mortar on the sides. Plaster 3–10 mm thick; directly on stone. *Condition*: poorly preserved; numerous losses and abrasions; severe granular disintegration of plaster; remains of epoxy(?) resin.
Paint layer	Red paint applied in one thick layer. *Condition*: relatively good; yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.

Cat. 22

Inv. No. 97139

Representation
Simple red cross with knobbed terminals

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	16 × 28 (face) × 8 cm; well-dressed, small ashlar. *Condition*: back side trimmed; otherwise in good condition.
Mortar/plaster	Type 2 mortar on the sides, in the deepest interstices of the stone. Plaster 5–10 mm thick; directly on stone. *Condition*: poor; surface severely abraded; edges jagged; severe granular disintegration of plaster.
Paint layer	Red paint applied in one, originally thick layer. *Condition*: poor; abraded; powdery; affected by biodegradation noted in 2009; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.

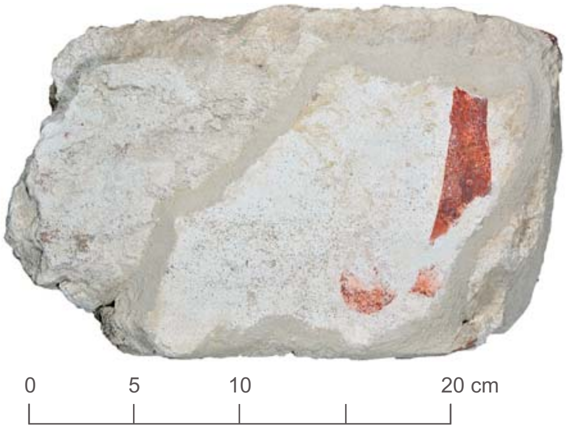




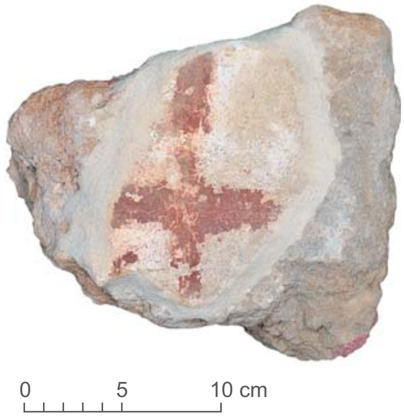
Scratches and gouges made intentionally in the plaster (view in raking light); top, after treatment (2018)

Cat. 23 *Inv. No.* JY12WP12	*Representation* Simple red cross with knobbed terminals	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2012
Stone	35 × 52 (face) × 20 cm; relatively regular ashlar; large cavities and voids in the stone. *Condition*: good overall; minor chipping; dried moss on the sides of the ashlar.	
Mortar/plaster	Type 2 mortar on the face and on the sides. Plaster 10–15 mm thick. *Condition*: crumbled preparatory mortar; abraded surface; cracks in the plaster; detachment of plaster along the top edge; granular disintegration of plaster; intentional deep scratches and gouges on the cross.	
Paint layer	Red paint applied in one, originally thick layer. *Condition*: small losses and abrasions; remains of yellowed varnish; surface grime; clusters of compacted earth adhering to the surface.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.	

Cat. 24, 25



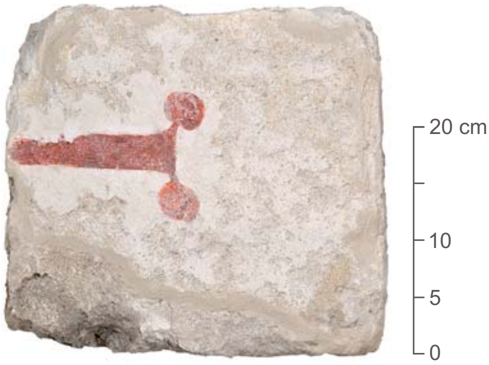
After treatment (2019) *Cat. 24*



After treatment (2017) *Cat. 25*

Cat. 24 *Inv. No.* JY92WP	*Representation* Simple red cross with knobbed terminals	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	17 × 26 (face) × 13 cm; fragment of a well-dressed ashlar; numerous bioclasts visible in the stone. *Condition*: broken on the left side, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the face and sides of the ashlar. Plaster 5–7 mm thick. Remains of older plaster on the right edge attest to secondary use. *Condition*: surface pitted and abraded; poor adhesion; crumbly; granular disintegration of plaster.	
Paint layer	Dark red paint applied in one layer. *Condition*: good overall; slightly powdery; small losses and abrasions; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 25 *Inv. No.* JY93WP	*Representation* Simple red cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	17 × 19 (face) × 13 cm; corner of an ashlar. *Condition*: fresh breaks visible on two sides.	
Mortar/plaster	Type 2 mortar on the sides. Plaster 7–9 mm thick. *Condition*: abraded; minor surface losses; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: powdery and sensitive; minor losses and abrasions; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2019) *Cat. 26*



After treatment (2019) *Cat. 27*

Cat. 26 *Inv. No.* –	*Representation* Simple red cross with knobbed terminals	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	33 × 31 (face) × 16 cm; well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the sides. Plaster 6–8 mm thick. *Condition*: very deteriorated surface, rough and pitted; granular disintegration of plaster.	
Paint layer	Red paint applied in one thick layer. *Condition*: numerous losses due to condition of the plaster; powdery and sensitive; streaks of transparent, glossy varnish visible in raking light; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 27 *Inv. No.* JY66WP	*Representation* Simple red cross with knobbed terminals	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	35 × 56 (face) × 13 cm; well-dressed ashlar. *Condition*: good; corners slightly rounded.	
Mortar/plaster	Type 2 mortar on the face and on the sides. Two layers of plaster with similar composition; the top layer 5–7 mm thick, the lower layer slightly thinner. *Condition*: deep losses and abrasions on the right side of the extant plaster; pitted; granular disintegration of plaster; small, dried roots stuck in the interstices between the plaster and mortar.	
Paint layer	Red paint applied in one thick layer. *Condition*: small abrasions and losses; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 28



After treatment (2017)

Cat. 28 *Inv. No.* JY45WP	*Representation* Simple red cross	
Fig. 4-12	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	34 × 52 (face) × 17 cm; relatively regular ashlar with one corner intentionally carved out. *Condition*: good; a large cavity visible from the front.	
Mortar/plaster	Type 2 mortar on the face and on the sides. Two layers of plaster observed along one of the edges, the lower one possibly from an earlier construction phase (likely secondary use of the ashlar); the top, painted plaster 5–7 mm thick. *Condition*: good overall; slight detachment of the plaster along the bottom edge; granular disintegration of plaster.	
Paint layer	Red paint applied in a single, thick layer. *Condition*: worn out, abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2018); top, after discovery (2010) and tracing

Cat. 29 *Inv. No.* JY164WP	*Representation* Simple red cross with decorative terminals; diagonal rays emanating from the intersection of its members	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	36 × 44 (face) × 14 cm; carved-out corner measures 9 × 19 cm. *Condition*: good.	
Mortar/plaster	Type 2 mortar on most of the face. Plaster 5–8 mm thick. *Condition*: surface of extant plaster larger upon discovery; numerous losses, abrasions; severe granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: poor; paint worn, abraded, slightly powdery; surface grime; dull, glossy varnish.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 30

Cat. 30

Inv. Nos
a – 98543
b – 97132
c – 98508
d – 98526

a – Figs 3-24, 4-15, 4-18A
d – Figs 4-2, 4-30

Representation
Jeweled cross set on a decorative base; diagonal rays emanating from the intersection of its members

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone
a – 29 × 40 (face) × 6 cm; fragment of an ashlar; ***b*** – 27 × 17 (face) × 8 cm; small, well-dressed ashlar; element protruding on the right is a large lump of mortar attached to the stone; ***c*** – 33 × 16 (face) × 40 cm; roughly dressed ashlar used as a header; ***d*** – 32 × 38 (face) × 7 cm; well-dressed ashlar.
Condition: ***a*** – two corners missing, old breaks; back side trimmed; ***b*** – back side trimmed; ***c*** – fresh break on the left side of the ashlar; ***d*** – good overall; corners rounded; some chipping along the edges; back side trimmed.

Mortar/plaster
Type 2 mortar visible along the edges. Plaster 4–9 mm thick.
Condition: good overall; granular disintegration of plaster. ***a*** – broad but shallow losses concentrated in the area of the horizontal member; ***b, d*** – shallow losses, abrasions.

Paint layer
Applied in several layers; watery base colors pulled with wide brushstrokes; details marked with impastos; paint handling quick and somewhat careless.
Condition: small losses and abrasions; much yellowed, glossy varnish; surface grime. ***b*** – hard mortar-like deposits adhering to the varnish.

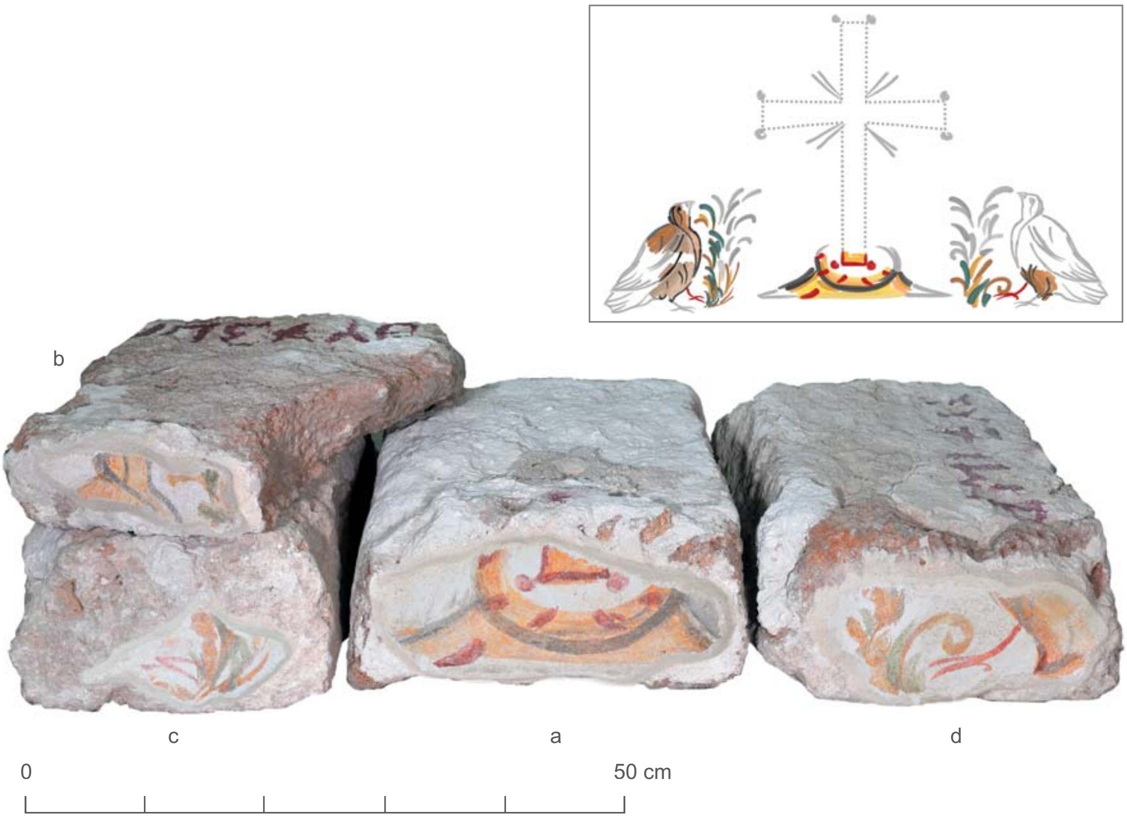
Treatment
Disinfection; consolidation of plaster edges and abraded areas; consolidation of a lump of mortar adhering to the side of fragment ***b***; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.

Cat. 30



After treatment (2018); tentative recomposition

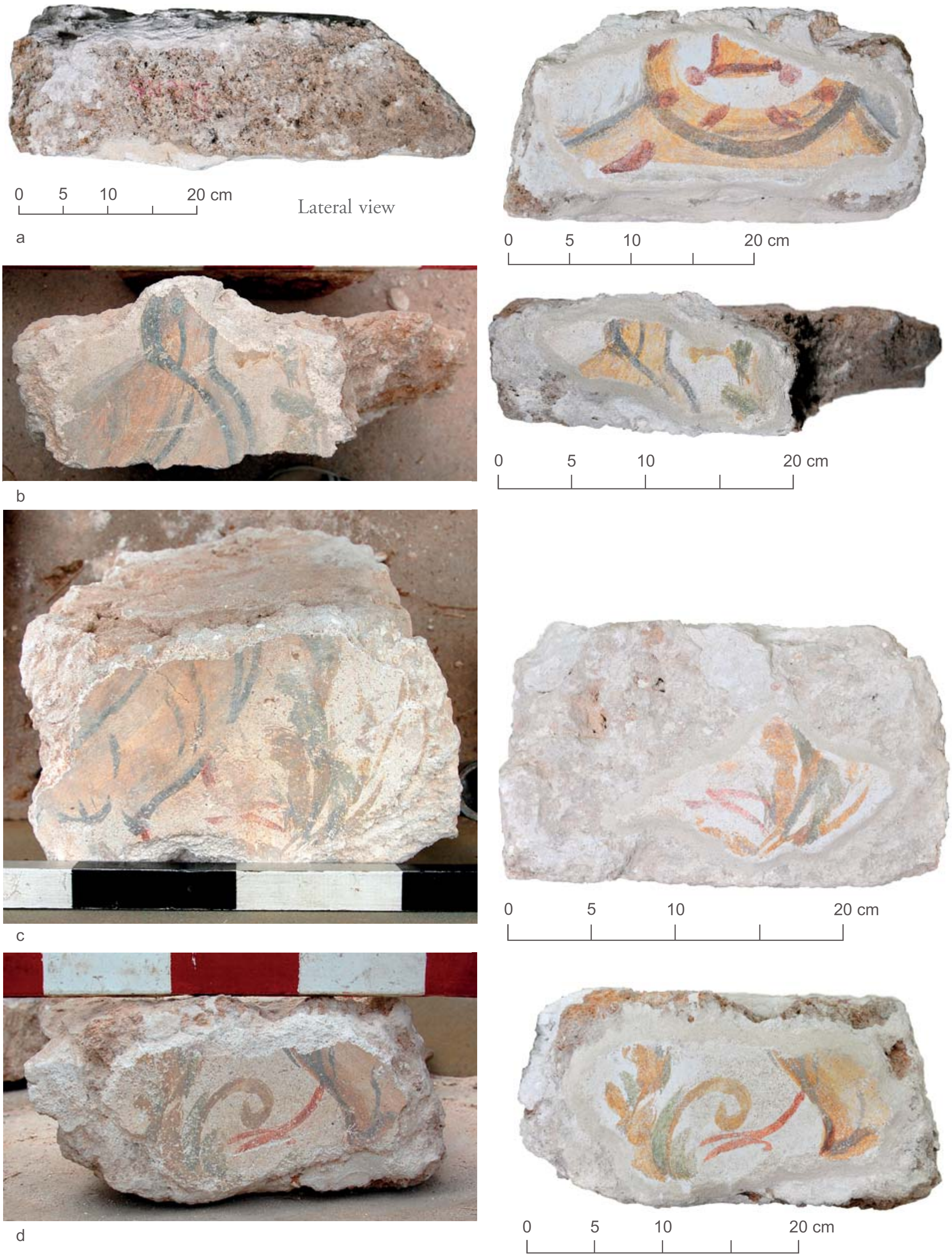
Cat. 31



Recomposition of four fragments after treatment (2019); upper right, reconstruction: parts visible at the time of discovery in color; hypothetical reconstruction in gray; opposite page, after discovery

Cat. 31 *Inv. Nos* *a* – JY16WP12 *b* – JY73WP *c* – JY74WP *d* – JY71WP	*Representation* Jeweled cross set upon a decorative base and flanked by two partridges pecking on small shrubs	
Fig. 6-19 *b – Fig. 4-11* *b,c – Fig. 6-22*	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	***a*** – 15 × 37 (face) × 40/51 (top/bottom surface) cm; ***b*** – 8 × 35 (face) × 40 cm; ***c*** – 15 × 28 (face) × 40/50 (top/bottom surface) cm; ***d*** – 15 × 33 (face) × 40/51 (top/bottom surface) cm; ***a, c, d*** – corbel-like element with protruding triangular profile; ***b*** – horizontal flat ashlar. *Condition*: ***a, c, d*** – good; ***b*** – one of the corners of the plastered and painted side broken, fresh break.	
Mortar/plaster	Type 2 mortar underneath the plaster and on all sides; ***b*** – also on the top and bottom surfaces. Plaster 3–8 mm thick. *Condition*: shallow losses, scuffs, and abrasions; granular disintegration of plaster; ***b–d*** – preserved plaster surface larger at the time of discovery, plaster disintegrated in storage at Jiyeh.	
Paint layer	Applied in semi-translucent layers, watery and thin; paint handling quick and confident. *Condition*: numerous small, fresh-looking losses, scuffs, and abrasions; surface grime; ***c, d*** – red legs of birds powdery.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer (*c, d*); infilling losses of plaster; inpainting.	

Cat. 31



After discovery (2010)

After treatment (2019)

Cat. 32, 33



After discovery (1975) *Cat. 32*



After discovery (1975) *Cat. 33*

Cat. 32

Inv. No.
–

Representation
Jeweled cross with letters *alpha* and *omega*; thin red frame with vegetal motifs below the cross

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –

Cat. 33

Inv. No.
–

Representation
Jeweled cross with the letter *omega* and a blue-headed bird next to it

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –





After discovery (2012); bottom, after treatment (2017)

Cat. 34 *Inv. No.* JY67WP	*Representation* Jeweled cross; green diagonal rays emanating from the intersection of its members	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	22 × 29 (face) × 42 cm; roughly dressed ashlar. *Condition*: good overall; old losses filled with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the sides and underneath the plaster. Plaster 6–7 mm thick; on two opposite sides, the other side plain. *Condition*: good; minor, fresh-looking losses; granular disintegration of plaster; preserved patch of plaster slightly larger at the time of discovery.	
Paint layer	Relatively thick, applied in one or two layers. *Condition*: good overall; minor losses and abrasions; red elements slightly powdery; surface grime. Streaks of varnish observed on the opposite, plain face of the ashlar, none on the painted side.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

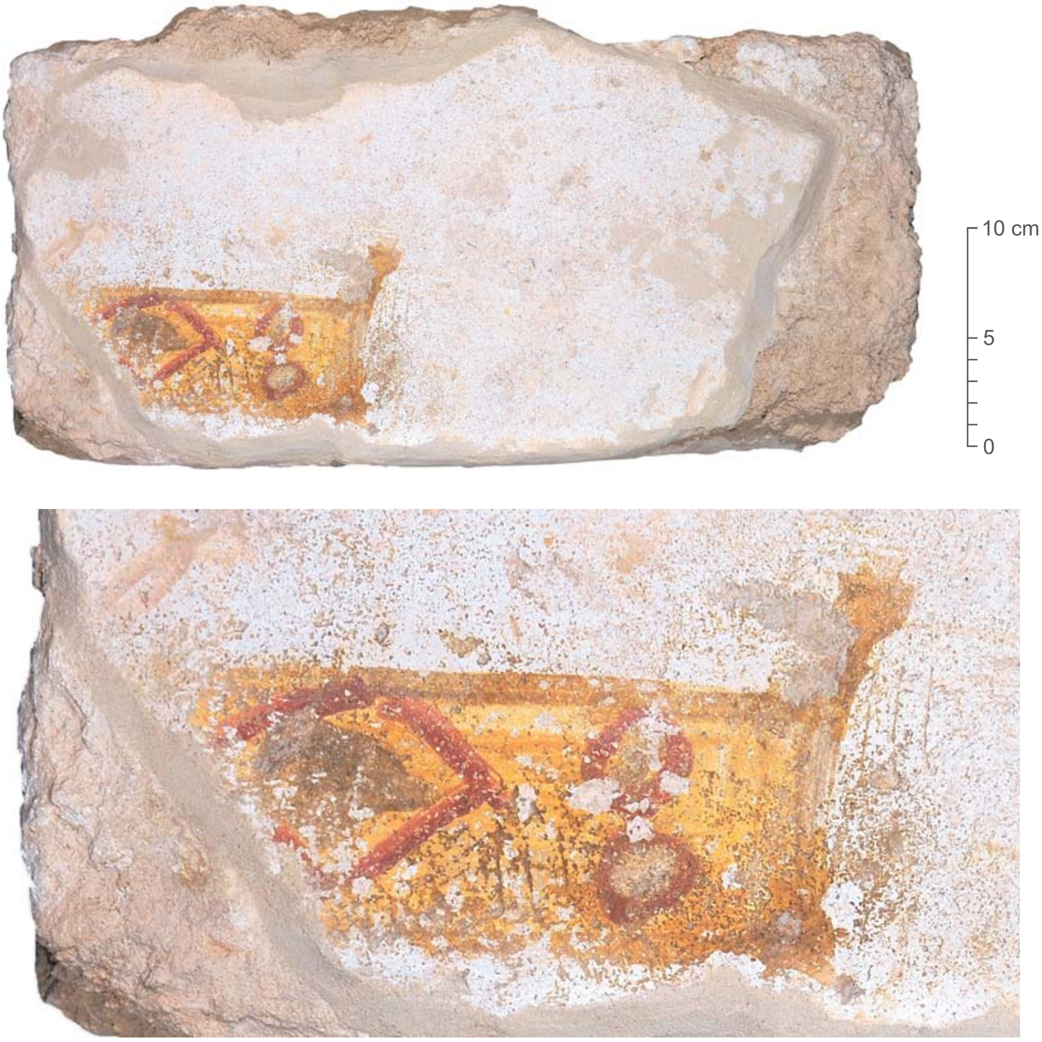
Cat. 35





After discovery (2000s); bottom, after treatment (2019)

Cat. 35 *Inv. No.* JY97WP	*Representation* Jeweled cross	
Fig. 4-33	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	12 × 24 (face) × 20 cm; flat, undressed stone, likely used to fill a gap between ashlars. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and in thick layers on the sides of the stone. Plaster 6–7 mm thick. *Condition*: deep losses and gouges (damage likely during or after excavation); granular disintegration of plaster.	
Paint layer	Layered paint buildup; light yellow base color pulled with wide brush; details rendered with relatively thick, opaque paint. *Condition*: good overall; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of paint layer; infilling losses of plaster; inpainting.	



After treatment (2017); bottom, detail of the jeweled cross member

Cat. 36 *Inv. No.* 98533	*Representation* Jeweled cross	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	21 × 42 (face) × 8 cm; well-dressed ashlar; original position in the wall structure possibly vertical. *Condition*: generally good; back side trimmed.	
Mortar/plaster	Type 2 mortar on the sides, some underneath the plaster. Plaster 6–9 mm thick. *Condition*: shallow surface losses and pits in the plaster; granular disintegration of plaster.	
Paint layer	Two layers: yellow base color of the cross and details executed on top of it; paint handling rather careless. *Condition*: numerous losses related to plaster condition; very yellowed varnish in the painted area; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 37

Inv. Nos
a – JY62WP
b – JY59WP

Sample
b – JY002
[*Fig. 3-4*]
b – ***Figs 3-11, 4-11, 4-20***

Representation
Jeweled cross; red florets springing diagonally from the intersection of its members
b – fragment of the floret visible in the upper left corner; letter *omega* next to the cross; generic green plant with a pink and red flower in the lower right corner

Provenance
Residential district

Discovery / transport to Beiteddine
2000s / ***a*** – 2016; ***b*** – 2012

Stone
a – 18 × 33 (face) × 40 cm; roughly dressed ashlar.
b – 34 × 38 (face) × 19 cm; well-dressed ashlar.
Condition: ***a*** – two corners missing, one from the face, the other from the back, apparently fresh breaks; otherwise in good condition. ***b*** – good; dirty with soil.

Mortar/plaster
a – Type 2 mortar only on the sides. Plaster 6–8 mm thick; directly on stone.
b – Type 1 mortar on the sides of the ashlar; Type 2 mortar underneath the plaster. Plaster 5–7 mm thick.
Condition: ***a*** – granular disintegration of plaster; long surface gouges and losses (damage probably during excavation); preserved plaster surface larger at the time of discovery, disintegrated in storage at Jiyeh.
b – contraction cracks on the right-hand side of the plaster; poor adhesion to the support; surface abrasions and losses; granular disintegration of plaster.

Paint layer
a – generally executed in one layer save for details of the cross executed on top of a yellow base color.
b – base color of the cross relatively thin, pulled with a wide brush; details of the cross painted on top; green plants executed with thick paint; brushwork quick and fluent.
Condition: ***a*** – losses of paint layer related to damaged plaster; numerous small losses and abrasions during storage at Jiyeh; red details powdery, pigment suffused on the surface; surface grime.
b – good; minor losses and abrasions; red parts slightly powdery; surface grime.

Treatment
a, b – disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; ***a*** – infilling losses of plaster; inpainting. ***b*** – reattachment of plaster to stone support.



After discovery (2010)

a



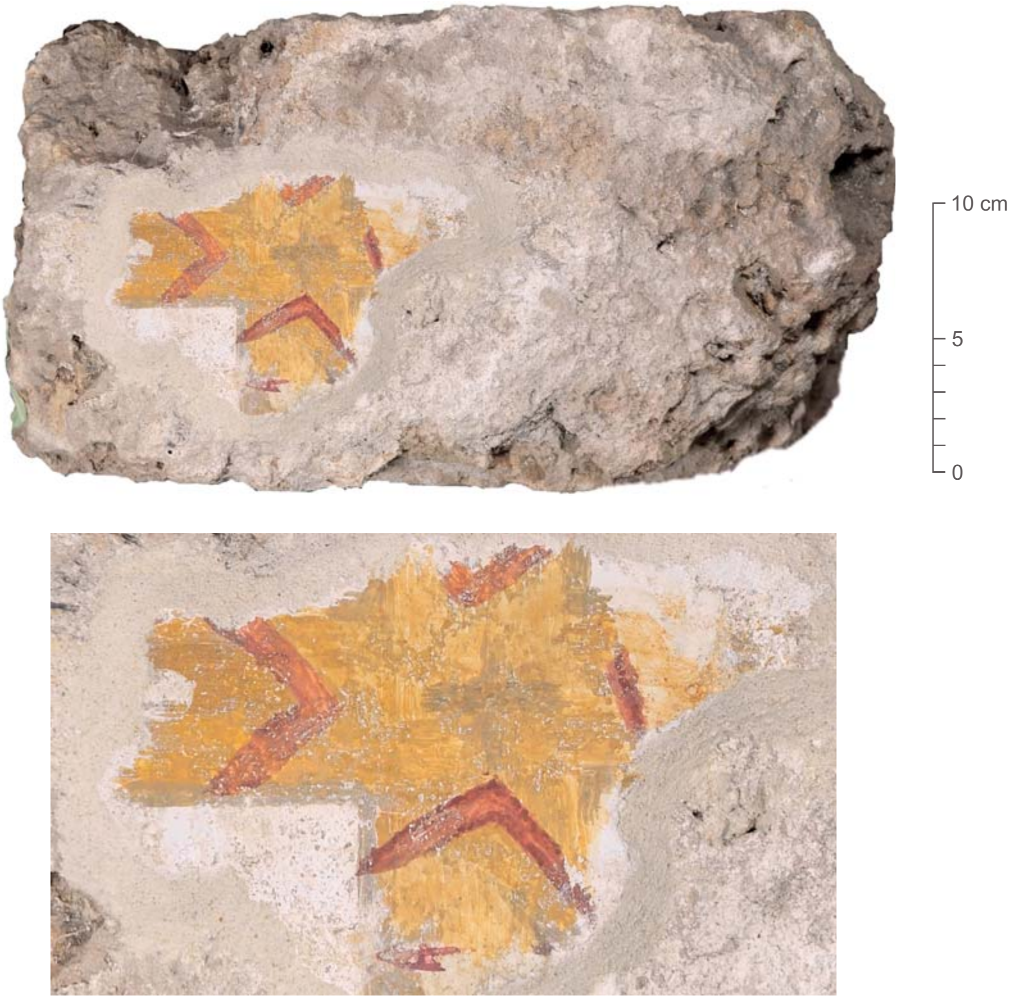
After treatment (2019)

b



After treatment (2017)

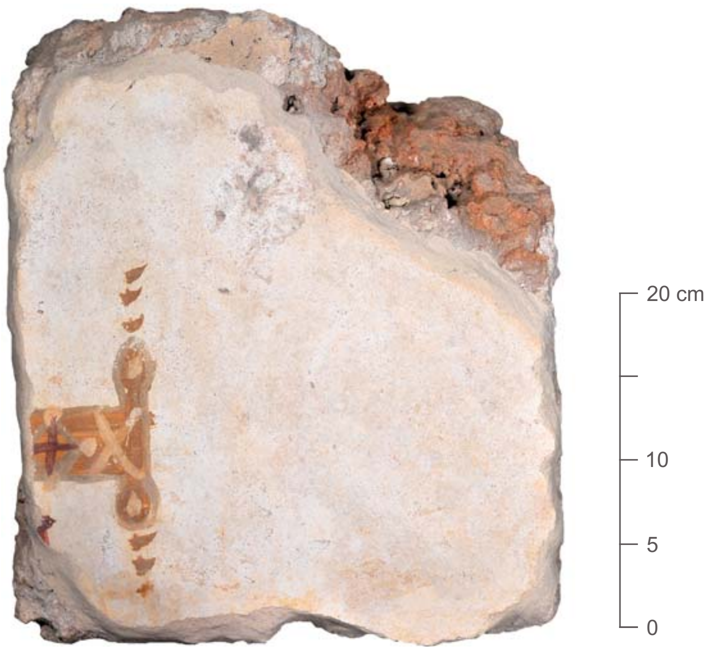
Cat. 38



After treatment (2019); bottom, preserved detail

Cat. 38 *Inv. No.* JY46WP	*Representation* Jeweled cross, treated schematically	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	19 × 34 (face) × 39 cm; dressed ashlar; porous, rough stone; original position in the wall structure vertical(?) *Condition*: corner missing from the front, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the sides and underneath the plaster. Plaster about 6 mm thick. *Condition*: little of the plaster preserved; numerous losses and abrasions; granular disintegration of plaster.	
Paint layer	Two layers: yellow base color of the cross and brown and white details on top of it; limited color palette; paint handling rather careless. *Condition*: poor; numerous losses; brown parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 39, 40



After treatment (2017) *Cat. 39*



After discovery (1975) *Cat. 40*

Cat. 39

Inv. No.
JY54WP

Sample
Jy003
[*Fig. 3-4*]

Representation
Jeweled cross with decorative knobs at the terminals; red element in the lower left corner, possibly a fragment of the letter *omega* (observed in archival documentation)

Provenance	*Discovery / transport to Beiteddine*
Residential district	2000s / 2012

Stone	39 × 34 (face) × 12 cm; almost square ashlar; porous, crumbly stone. *Condition*: one corner missing, fresh break; otherwise good condition.
Mortar/plaster	Type 1 mortar on the sides and underneath the plaster. Plaster 8–10 mm thick. *Condition*: weakened adhesion along the edges; minor losses and scuffs; granular disintegration of plaster.
Paint layer	Applied thickly; blending of colors betrays wet-into-wet painting; limited color palette; paint handling quick and careless. *Condition*: good overall; minor losses and scuffs; red parts slightly powdery; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.

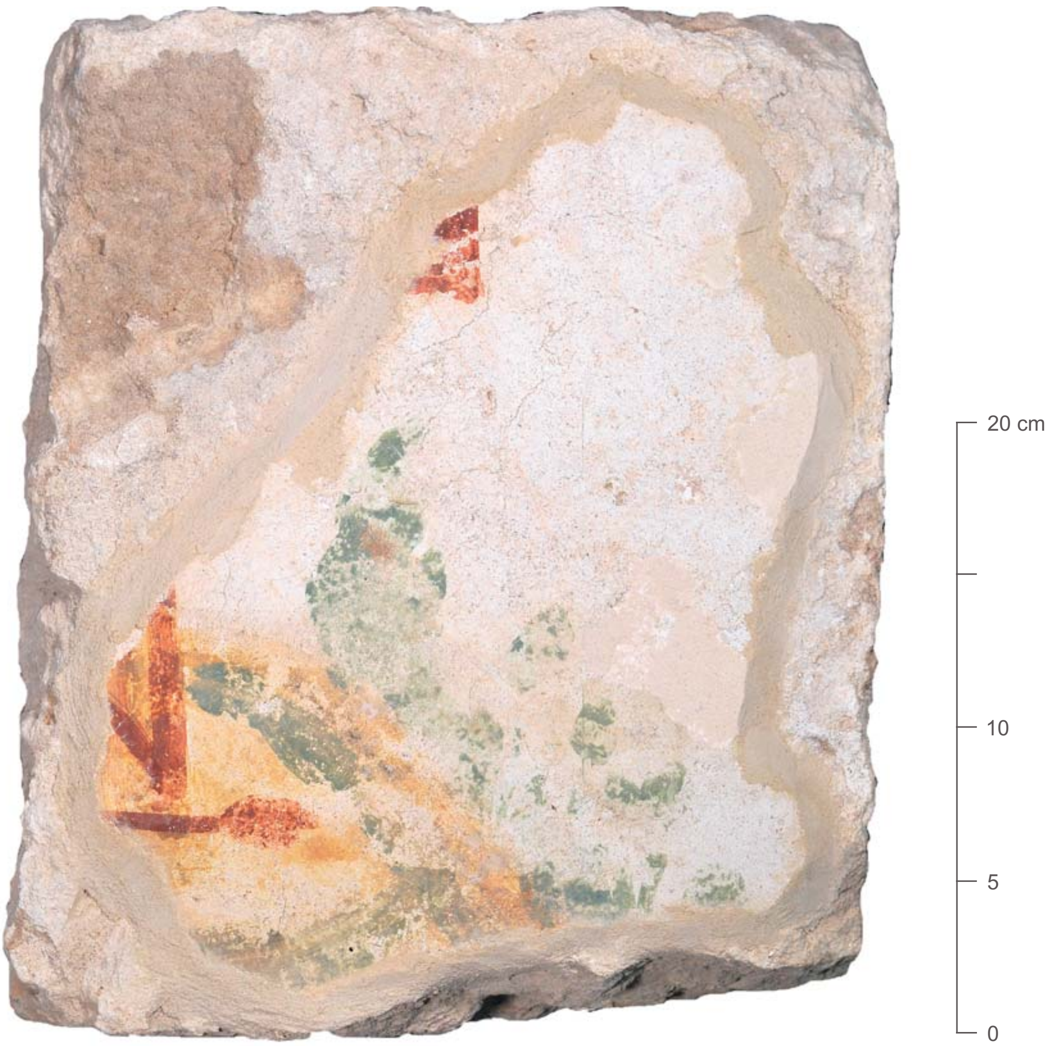
Cat. 40

Inv. No.
–

Representation
Jeweled cross with decorative knobs at the terminals; similar to *Cat. 39*, but the “curls” on both sides of the knobs are red here (compared to ocher in *Cat. 39*)
Note cracked plaster, about to detach

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –

Cat. 41



After treatment (2017)

Cat. 41 *Inv. No.* JY15WP12	*Representation* Jeweled cross(?) set upon a base and flanked by clumps of generic plants	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	33 × 28 (face) × 15 cm; well-dressed ashlar; slightly askew. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 4–8 mm thick. *Condition*: some minor contraction cracks in the plaster; shallow losses; granular disintegration of plaster.	
Paint layer	Layered paint structure; red elements and foliage applied on top of a semi-transparent, thin yellow paint; brushwork quick and rather careless. *Condition*: severe abrasion, especially in the green parts; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017): note plaster folded over the edge and continuing on the side of the ashlar; bottom left, section view

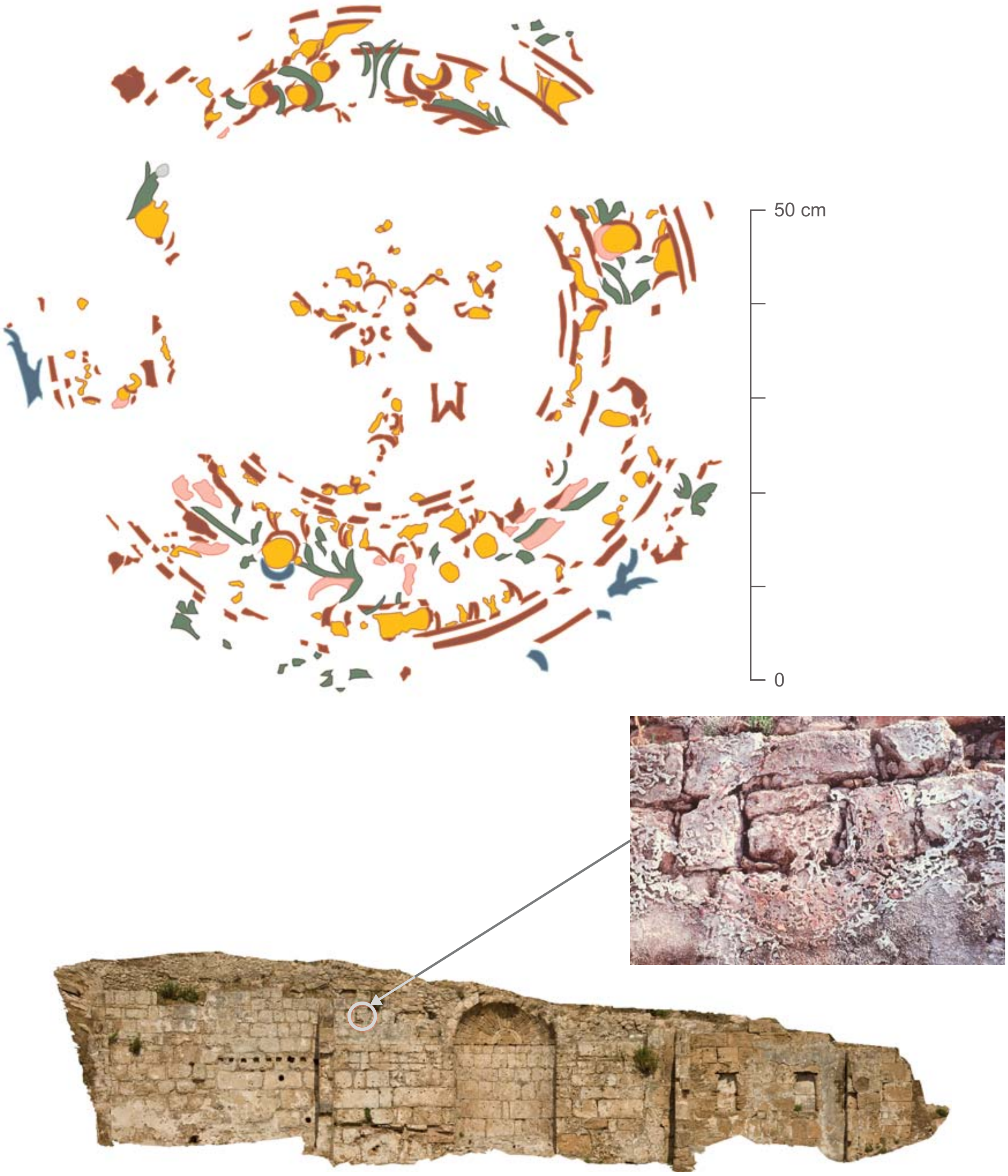
Cat. 42 *Inv. No.* 98547	*Representation* Jeweled(?) cross	
Fig. 3-7	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 28 (face) × 20 cm; well-dressed, L-shaped ashlar. *Condition*: good overall.	
Mortar/plaster	Type 1 mortar on the back side of the ashlar; Type 2 mortar on the face and sides; fragments of potsherds inserted in the mortar. Two sides plastered, the lateral side plain; plaster 8–10 mm thick. *Condition*: poor adhesion; granular disintegration of plaster.	
Paint layer	Simple buildup; treated schematically; color palette limited to two colors; remains of white impastos imitating pearls. *Condition*: poor; severely abraded and faded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 43



After treatment (2017)

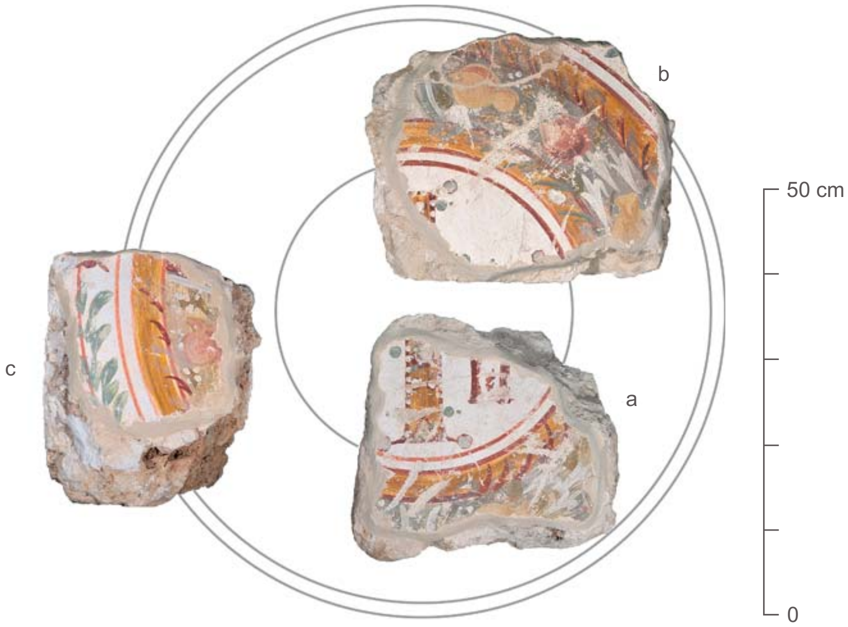
Cat. 43 *Inv. No.* 98521	*Representation* Jeweled cross; diagonal rays emanating from the intersection of its members	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 29 (face) × 8 cm; fragment of an ashlar. *Condition*: broken on two sides, bottom break appears fresh; back side trimmed.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 6–10 mm thick. *Condition*: shallow losses and abrasions; granular disintegration of plaster.	
Paint layer	Simple buildup; red details and contours executed on top of a yellow base color; paint handling quick and cursory. *Condition*: relatively good; losses related to plaster condition; remains of thin yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.	



Location of the painting on the east wall of the basilica (circle)
and close-up of extant remains (about 2004); top, tracing of the remains

Cat. 44	*Representation*	
Inv. No.	Jeweled cross with *alpha* and *omega* inside a wreath (diameter about 80 cm)	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Basilica	1987 and again in 2000s / –

Cat. 45



After treatment (2017); tentative recomposition

Cat. 45 *Inv. Nos* *a* – 97094 *b* – 98529 *c* – 98548 *Sample* *b* – Jy025	*Representation* Jeweled cross inside a wreath and with letters *alpha* and *omega*; the wreath is made of dense foliage with fruit and flowers in it Diameter of outermost ring surrounding the wreath about 85 cm	
a,b,c – Fig. 5-6 *b – Figs 3-25, 4-26, 6-22* *c – Figs 3-23, 3-26*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	All three elements probably in secondary use as attested by mortar inside old losses in the stone. ***a*** – 33 × 35 (face) × 14 cm; unshapely ashlar. ***b*** – 30 × 37 (face) × 16 cm; unshapely ashlar; front dressed, sides unhewn or damaged. ***c*** – 32 × 28 (face) × 42 cm; unshapely ashlar. *Condition*: good overall. ***c*** – one corner missing, break appears fresh.	
Mortar/plaster	Type 2 mortar visible underneath the plaster and on the sides. Plaster 8–12 mm thick. ***c*** – plaster on two opposite sides of the ashlar, the other side plain. *Condition*: granular disintegration of plaster. ***a*** – good adhesion only in the center and insufficient along the perimeter of the plaster; two large parallel gouges (made during excavation?); a few minor losses and scuffs. ***b*** – adhesion generally good except for one corner; a few broken fragments found separately in the store room; shallow losses, scuffs, and abrasions in the wreath. ***c*** – a few minor losses and scuffs along the perimeter of the plaster.	
Paint layer	Multilayered buildup; skillful paint handling and use of color; foliage rendered with several shades of green; the use of shading evident on the fruit. *Condition*: small losses and scuffs: numerous on ***a*** and ***b*** and few on ***c***; slight powdering of red parts; surface grime; a few hard, mortar-like deposits on ***a***; otherwise, paint layer in good condition.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support (***a***, ***b***); reintegration of broken fragments of plaster (***b***); application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 45

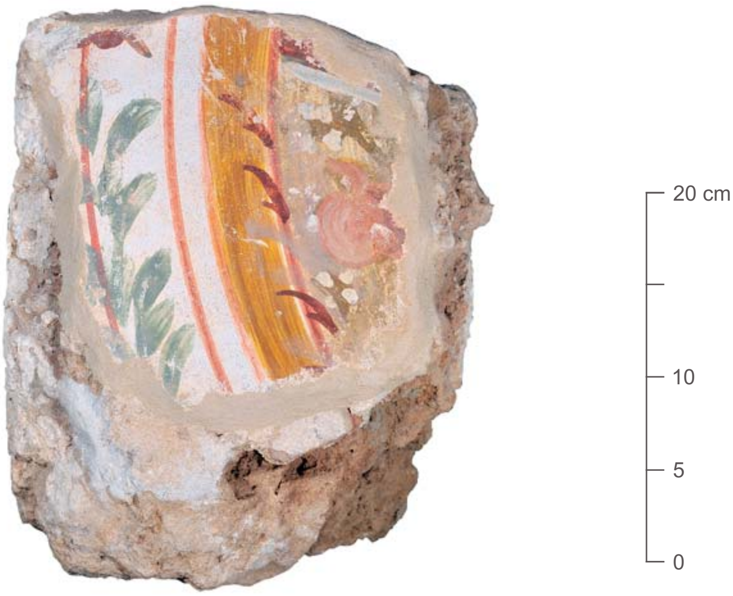
a



b



c



After treatment (2017)

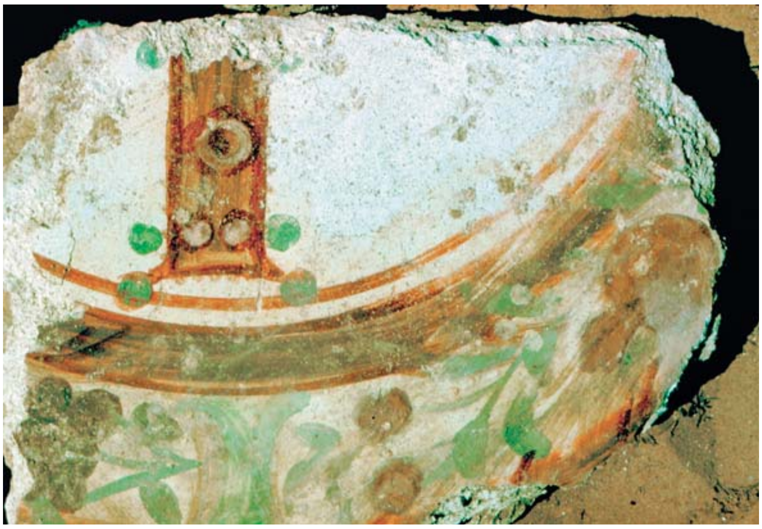
Cat. 46





After treatment (2017)

Cat. 46 *Inv. No.* JY4WP12	*Representation* Jeweled cross against green background, inside a wreath with fruit set in the foliage	
Figs 5-6, 6-22	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	37 × 48 (face) × 18 cm, roughly dressed ashlar; porous stone. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar underneath the plaster and in the largest cavities of the stone. Plaster 5–8 mm thick. *Condition*: minor losses and abrasions; vegetal roots caught in the interstices of the plaster and mortar; granular disintegration of plaster.	
Paint layer	Paint handling somewhat disorderly; layered buildup gives way to painting wet-into-wet. *Condition*: worn and abraded; numerous scuffs; powdery; thick surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After discovery (1975)

Cat. 47

Inv. No.
–

Fig. 4-16

Representation
Jeweled cross inside a wreath with fruit set in the foliage

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –



After treatment (2017)

Cat. 48

Inv. No.
98531

Representation
Densely foliated wreath, likely encircling a cross

Provenance	*Discovery / transport to Beiteddine*
Basilica	1987 / about 1987

Stone	22 × 40 (face) × 14 cm; large, porous fieldstone. *Condition*: good overall.
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 8–10 mm thick. *Condition*: minor losses and abrasions, especially along the perimeter of the plaster; minor plaster detachment; granular disintegration of plaster.
Paint layer	Layered buildup; leaves painted in several shades of green, applied thickly with the use of a rigid brush upon a thin base color. *Condition*: numerous small abrasions and losses; surface grime.
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime.

Cat. 49



After treatment (2017)

Cat. 49 *Inv. No.* 98502	*Representation* Wreath with fruit set in the foliage, likely encircling a cross	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 44 (face) x 18 cm; well-dressed ashlar; mortar filling old losses in the stone, indicating damage prior to use in construction. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar in large amounts filling irregularities and voids in the stone. Plaster 7–12 mm thick. *Condition*: adhesion weakened along the perimeter of the plaster; broad shallow abrasions; granular disintegration of plaster.	
Paint layer	Buildup cannot be assessed due to poor preservation; probably originally layered buildup. *Condition*: poorly preserved due to plaster condition; powdery; surface grime firmly adhering to rough plaster surface.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017)

Cat. 50 *Inv. Nos* JY96WP JY98WP *Sample* Jy030	*Representation* Wreath, likely encircling a cross	
Figs 4-23, 4-24, 6-22	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	32 × 52 (face) × 26 cm; well-dressed ashlar; missing corner covered with mortar, indicating damage prior to use in construction. *Condition*: broken in two, fresh break.	
Mortar/plaster	Type 2 mortar in the interstices and voids of the stone, partly under the plaster. Plaster 7–10 mm thick. *Condition*: poor adhesion of the plaster along the break line; surface abrasions, pits, and small losses; granular disintegration of plaster.	
Paint layer	Layered buildup in the wreath, where paint was applied thickly; treatment of wreath quick and somewhat disorderly; leaves surrounding the wreath skillfully rendered with watery, semi-translucent paint. *Condition*: overall very good; minor losses and abrasions; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; reassembling the two fragments; infilling joint between fragments; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	

Cat. 51



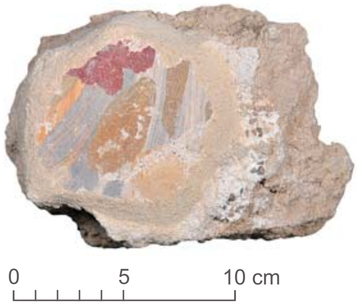
After treatment (2017)

Cat. 51 *Inv. No.* JY102WP	*Representation* Wreath with fruit set in the foliage, likely encircling a cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	25 × 34 (face) × 14 cm; unshapely ashlar. *Condition*: good; missing corner covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar in a thin layer visible along the top side. Plaster 7–12 mm thick. *Condition*: small losses and pits all over the plaster surface; granular disintegration of plaster.	
Paint layer	Poor condition hinders assessment of the buildup. *Condition*: poor; badly abraded paint, revealing underlying plaster in some places; powdery; thick layer of surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 52, 53



After treatment (2017) *Cat. 52*



After treatment (2017) *Cat. 53*

Cat. 52 *Inv. No.* JY8WP12	*Representation* Wreath, likely encircling a cross	
Figs 4-14, 4-28	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	33 × 42 (face) × 20 cm; well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 1 mortar remains on the sides of the ashlar; Type 2 mortar visible in some places underneath the plaster. Plaster 7–10 mm thick. *Condition*: cracks; granular disintegration of plaster; large ink stain.	
Paint layer	Poor condition hinders assessment of the buildup. *Condition*: severely abraded and faint; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of ink stain; consolidation of powdery paint layer.	

Cat. 53 *Inv. No.* –	*Representation* Detail of a foliated wreath with fruit and/or flowers	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	10 × 14 (face) × 7 cm; fragment of a masonry element. *Condition*: fresh breaks on two sides; back side trimmed; possibly broken off during the trimming.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster about 5 mm thick. *Condition*: good except for granular disintegration of plaster.	
Paint layer	Superimposed layers of thickly applied paint; evidence of painting wet-into-wet. *Condition*: very good save for minor losses; slightly dusty.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting.	

Cat. 54



After treatment (2017)

Cat. 54 *Inv. Nos* *a* – 97129 *a'* – 97136 *b* – 97127	*Representation* Jeweled cross inside a medallion decorated with cable pattern	
Fig. 5-9	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	***a*** – 37 × 44 (face) × 11 cm; well-dressed ashlar; crumbly. ***b*** – 31 × 16 (face) × 20 cm; fragment of an ashlar; rough, porous stone. *Condition*: ***a*** – two restorable fragments, fresh breaks; back side trimmed; already broken prior to trimming considering the different thicknesses. ***b*** – broken on two sides, one of the breaks appears fresh; otherwise in good condition.	
Mortar/plaster	Type 2 mortar locally along the edges of the ashlar. ***b*** – also in the cavities of the stone. Plaster 6–10 mm (*a*) and 8–10 mm (*b*) thick. *Condition*: losses, scuffs, and abrasions, especially on the perimeter of the plaster (*b*); granular disintegration of plaster.	
Paint layer	Medallion executed with thick, opaque, superimposed layers of paint; semi-transparent base color of the cross; details of the cross executed with relatively thick paint. *Condition*: abrasion and losses scattered all over; colors of the medallion apparently faded; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting. The thinness of the two elements (*a, a'*), as well as missing third part of the ashlar made reassembling impossible, considering also the condition of the stone and the small contact surface between the two extant fragments.	



After discovery (1975)

Cat. 55

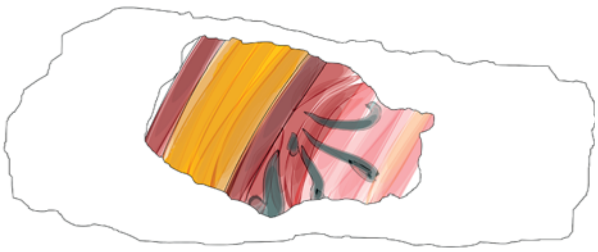
Inv. No.
–

Fig. 5-14

Representation
Medallion with lotus band decoration, possibly encircling a jeweled cross

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –





After treatment (2017) and color tracing

Cat. 56

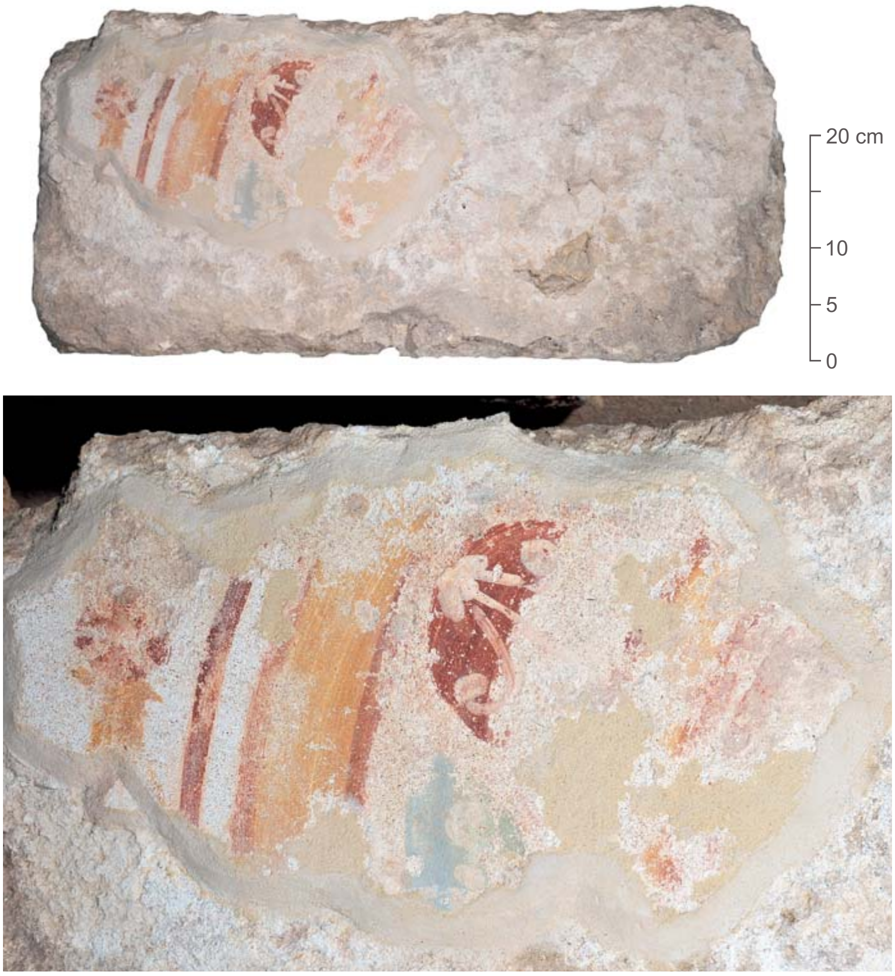
Inv. No.
JY70WP

Representation
Lotus-band decoration on a medallion possibly encircling a jeweled cross

Provenance	*Discovery / transport to Beiteddine*
Residential district	2000s / 2012

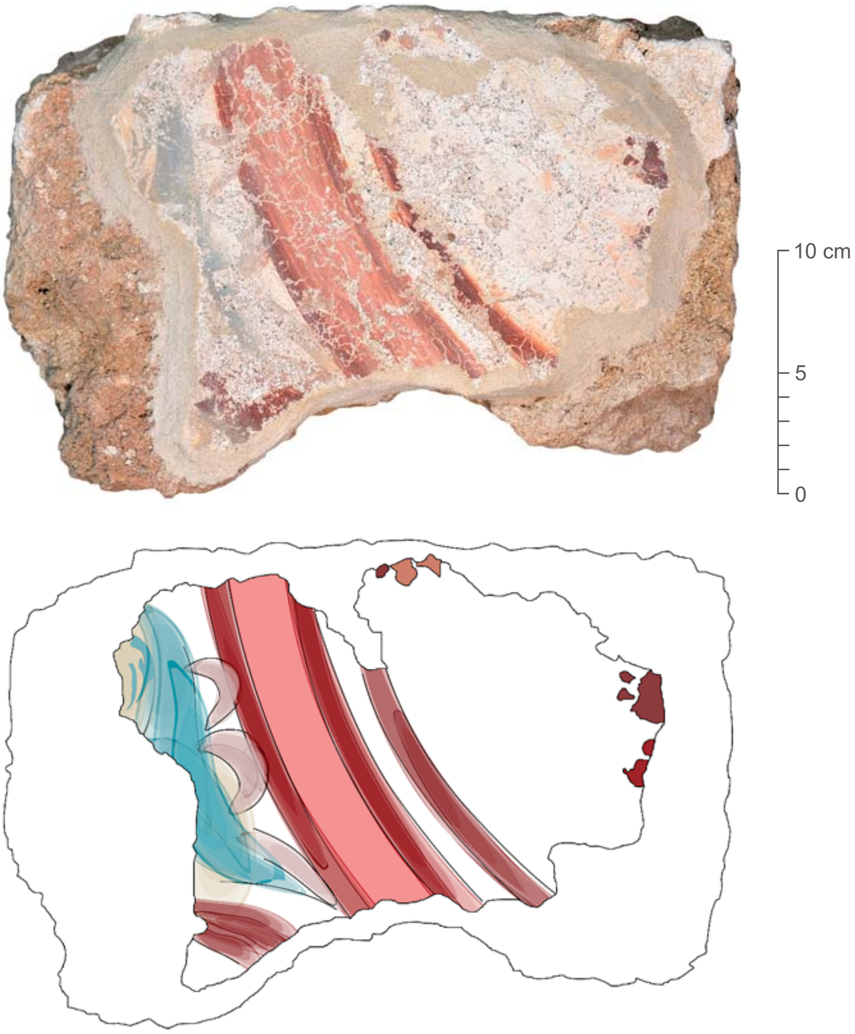
Stone	9.5 × 27 (face) × 16 cm; small, flat, undressed stone. *Condition*: good.
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 4–5 mm thick, even. *Condition*: good; minor losses; granular disintegration of plaster.
Paint layer	Layered buildup, details executed on top of the base color; pink and red base colors thick and opaque, yellow semi-transparent. *Condition*: numerous losses and abrasions in the yellow and red color fields; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime.

Cat. 57



After treatment (2017); bottom, detail of lotus band decoration

Cat. 57 *Inv. No.* JY2WP12 *Figs 3-28, 3-34*	*Representation* Medallion with lotus-band decoration, possibly encircling a jeweled cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	31 × 67 (face) × 19 cm; a large, well-dressed ashlar. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar in the cavities of the ashlar surface. Plaster 5–7 mm thick; intermediate layer of plaster found locally; same composition as the top, painted layer. *Condition*: weakened adhesion of the plaster; numerous surface losses and abrasions; granular disintegration of plaster.	
Paint layer	Probably painted thickly; visible remains of white impastos painted wet-into-wet. *Condition*: poor, related to plaster condition; dark red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) and color tracing

Cat. 58 *Inv. No.* Jy30WP12	*Representation* Lotus-band decoration on a medallion possibly encircling a jeweled cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	20 × 30 (face) × 17 cm; well-dressed, originally rectangular ashlar. *Condition*: concave loss along one of the bottom sides, break appears fresh.	
Mortar/plaster	Type 2 mortar in the cavities of the stone. Plaster 5–7 mm thick where applied on top of the mortar and about 10 mm thick where directly on stone. *Condition*: many losses and abrasions of the plaster; root-like shallow channels in the surface; granular disintegration of plaster.	
Paint layer	Layered buildup; red band and the green element retain considerable thickness. *Condition*: deterioration of paint related to plaster condition; red parts powdery; red pigment suffused on the surface; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 59



After treatment (2018); tentative recomposition

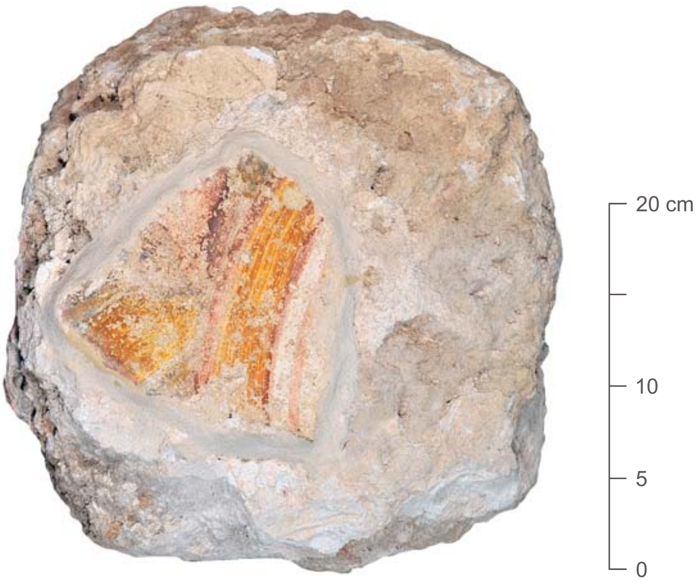
Cat. 59 *Inv. Nos* *a* – 98495 *b* – 98501	*Representation* Jeweled cross with *alpha* and *omega* in a medallion, decorated with wavy ribbon pattern	
Fig. 5-16 *a – Fig. 4-18A*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	***a*** – 31 × 49 (face) × 9 cm; ***b*** – 35 × 53 (face) × 6 cm; large, well-dressed ashlars. *Condition*: ***a, b*** – back side trimmed in both cases; both colonized by white fungi prior to conservation. ***a*** – bottom right corner chipped off.	
Mortar/plaster	Type 2 mortar along the perimeter of the plaster. Plaster 8–12 mm thick. *Condition*: numerous broad, shallow losses, gouges, and abrasions; severe granular disintegration of plaster. ***b*** – losses not covered with varnish must have occurred while the fragment was in storage.	
Paint layer	Buildup varies; cross painted with superimposed layers, decoration of the medallion wet-into-wet; red colors tend to be opaque, yellow elements semi-transparent. *Condition*: losses, scuffs, and abrasions all over; green elements especially abraded; thick, yellowed varnish; surface grime; ***a*** – hard, gray incrustations on the surface.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish (partial for ***b***); infilling losses of plaster; inpainting.	

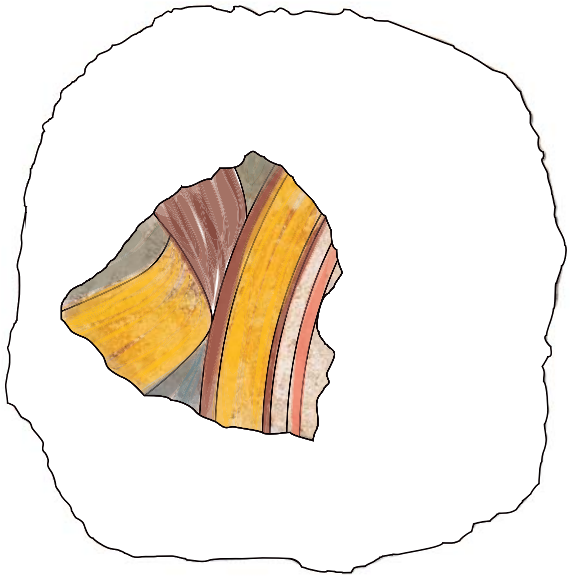


After treatment (2018)

Cat. 60 *Inv. No.* 97089	*Representation* Jeweled cross in a medallion decorated with twisted ribbon pattern	
Figs 4-18A, 4-34, 5-19	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	41 × 61 (face) × 14 cm; large, well-dressed ashlar. *Condition*: back side trimmed; chipping along the edges.	
Mortar/plaster	Type 2 mortar along the edges. Plaster 8–10 mm thick; in the center directly on stone. *Condition*: deep, broad abrasions and losses; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Layered buildup; details executed with thick, rather opaque paint on top of semi-transparent base colors; white impastos render pearls running on top of the inner red rings. *Condition*: poor due to plaster deterioration; numerous losses and abrasions of the paint; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer; infilling losses of plaster; inpainting.	

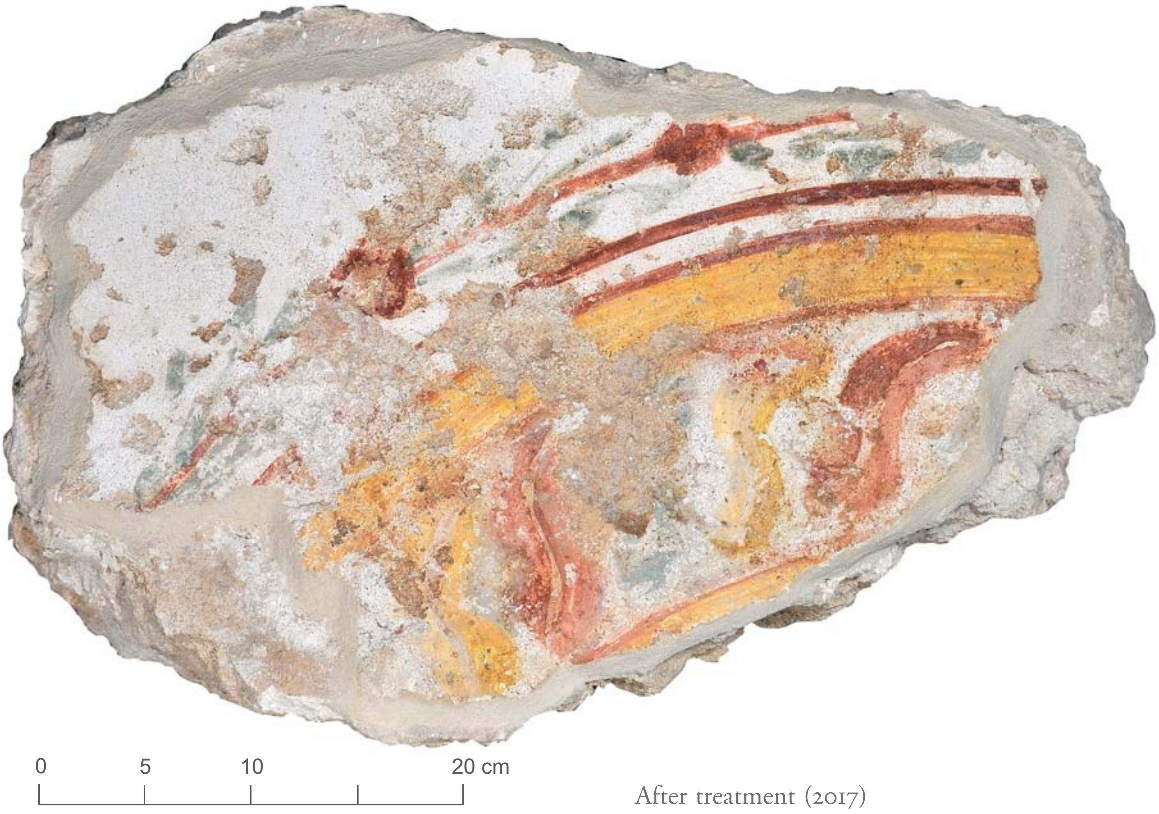
Cat. 61





After treatment (2017)

Cat. 61 *Inv. No.* JY95WP	*Representation* Twisted ribbon decoration on a medallion possibly encircling a jeweled cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	31 × 28 (face) × 16 cm; roughly dressed ashlar with rounded corners; rough, porous stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides, where it is applied thickly to compensate for the irregularities of the ashlar. Plaster 10–12 mm thick. *Condition*: surface pitted and abraded; some cracks; granular disintegration of plaster.	
Paint layer	Poor condition hinders evaluation of buildup; most likely the paint was applied thickly. *Condition*: poor due to plaster deterioration; abraded, faint and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017)

Cat. 62

Inv. No.
JY60WP

Samples
Jy006
[***Fig. 3-13***]
Jy007
[***Fig. 3-9***]

Fig. 5-20

Representation
Three-strand guilloche on a medallion, possibly encircling a jeweled cross

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 and again in 2000s / 2012

Stone	33 × 51 (face) × 20 cm; fragment of an ashlar. *Condition*: large part of the ashlar missing; otherwise in good condition.
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster slightly undulating; 5–15 mm thick. *Condition*: adhesion sufficient; deep surface losses and abrasions; granular disintegration of plaster.
Paint layer	Relatively thick, even considering its current condition; thick white paint used for highlights on the color strands. *Condition*: poor due to plaster deterioration; abrasion of some of the colors, especially green; dull, grayish varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer (necessary once varnish removed).

Cat. 63, 64



After discovery (1975)

Cat. 63

Inv. No.
–

Representation
Jeweled cross inside a medallion decorated with a pattern resembling a cable pattern; cross filled with dark red, pink, white, and green waves; lancet-shaped green rays emanating from the intersection of its members

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –



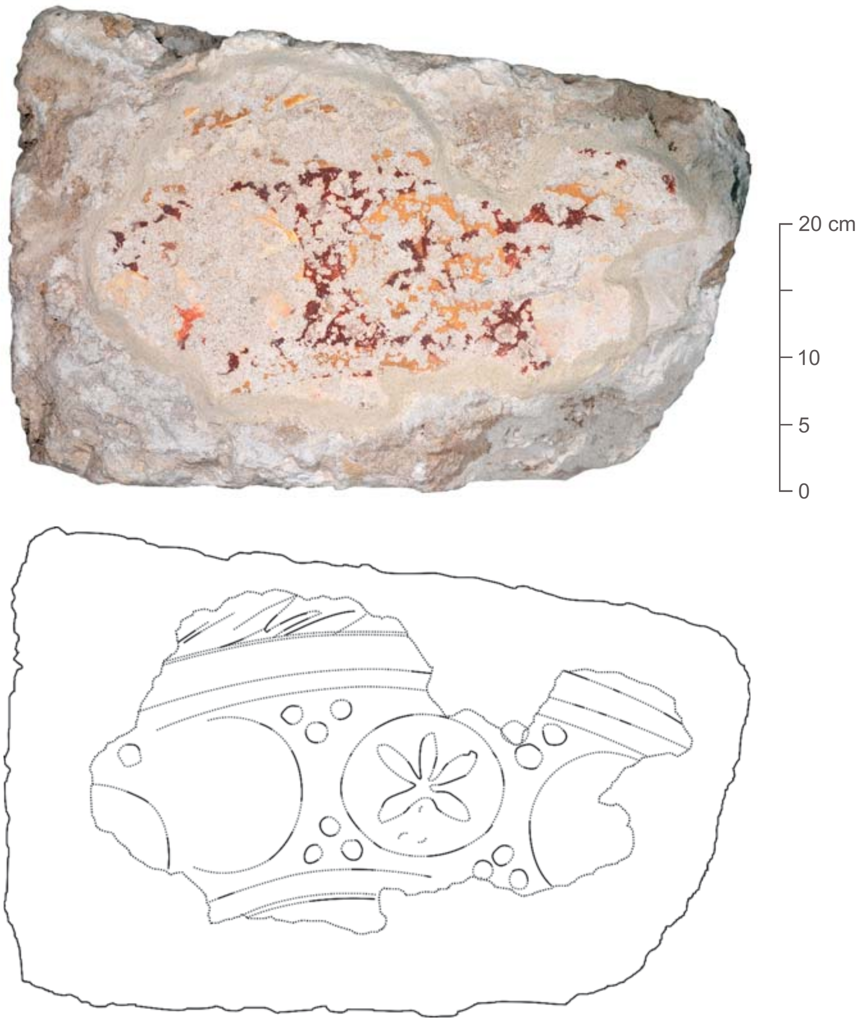
After discovery (1975)

Cat. 64

Inv. No.
–

Representation
Medallion decorated with a pattern consisting of red and green bands, crossed on a white background; inside the medallion, one of the terminals of a jeweled cross with green contours

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –



After treatment (2017) and tracing

Cat. 65 *Inv. No.* JY90WP	*Representation* Medallion decorated with a series of yellow round shapes (fruit?) against a dark red background possibly encircling a cross	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	34 × 57 (face) × 18 cm; roughly dressed ashlar; slightly trapezoidal. *Condition*: good overall; missing corner covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the sides. Plaster 7–9 mm thick. *Condition*: extremely abraded and marked by numerous shallow losses; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poor due to plaster deterioration; transparent, thin layer of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 66





After treatment (2018)

Cat. 66 *Inv. No.* 98509	*Representation* Medallion decorated with rosette-like elements, likely encircling a cross	
Fig. 4-18A	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 43 (face) × 9 cm; well-dressed ashlar. *Condition*: rounded corners; chipping along the edges; back side trimmed.	
Mortar/plaster	Type 2 mortar only on the top and bottom side. Plaster 6–9 mm thick; directly on stone. *Condition*: broad and shallow losses; surface abrasions; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poor; abraded and faint; matte, yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish.	

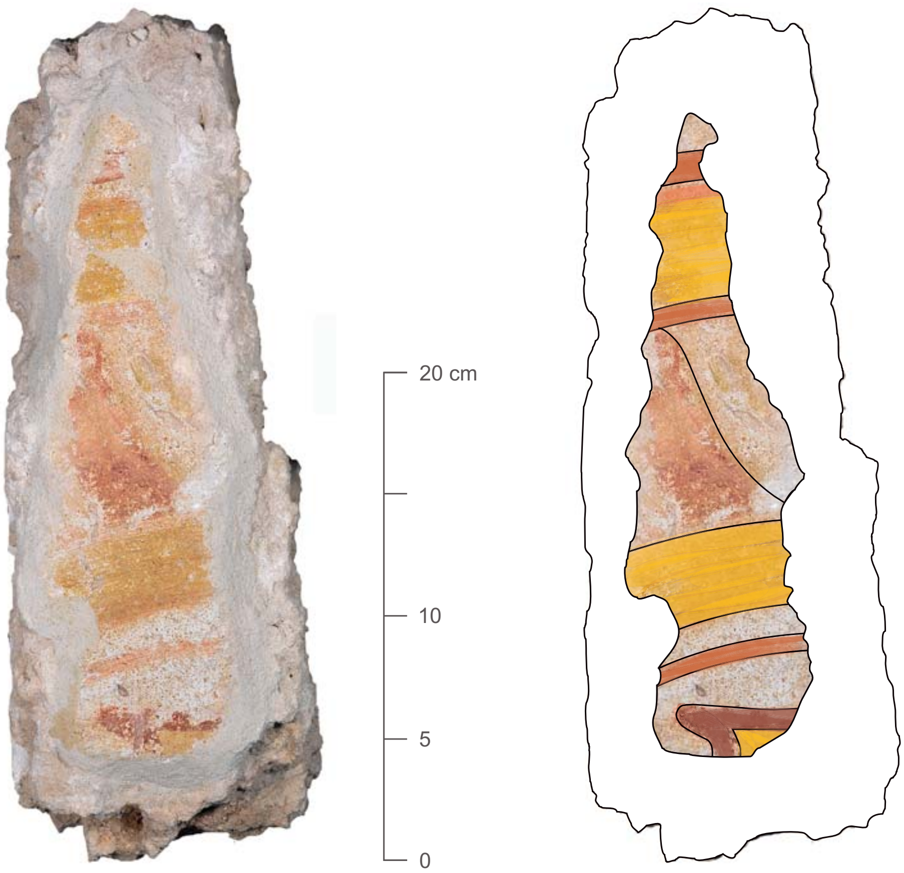




After treatment (2017); bottom, close-up of the letter *alpha*

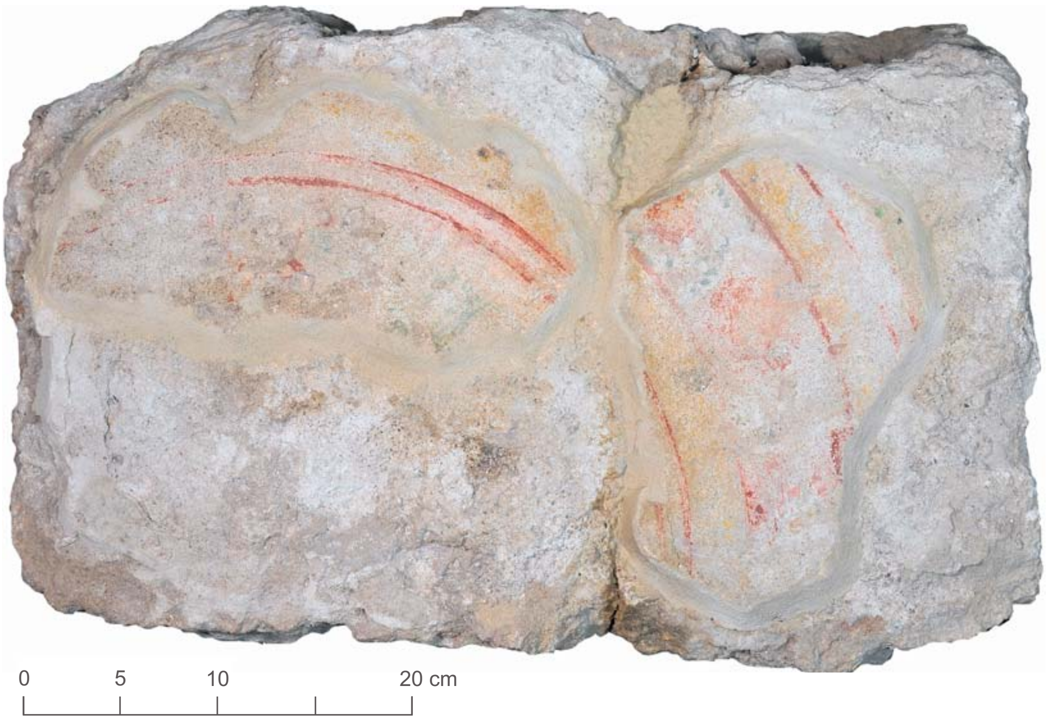
Cat. 67 *Inv. No.* JY99WP	*Representation* Golden medallion decorated with imitations of jewels; possibly a jeweled cross inside; white letter *alpha* against a bluish-gray background
	Provenance Residential district *Discovery / transport to Beiteddine* 2000s / 2016
Stone	31 × 27 (face) × 14 cm; originally well-dressed ashlar. *Condition*: all corners missing and rounded; covered with mortar, indicating damage prior to use in construction.
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 7–12 mm thick. *Condition*: poorly preserved; large part of the surface severely abraded; jagged plaster edges; granular disintegration of plaster.
Paint layer	Layered buildup; solid bluish-gray color, thickly applied; color of the yellow medallion somewhat thinner; details executed on top of the base color. *Condition*: areas not damaged along with the plaster appear in good condition; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.

Cat. 68



After treatment (2017)
Note tip of cross at the bottom

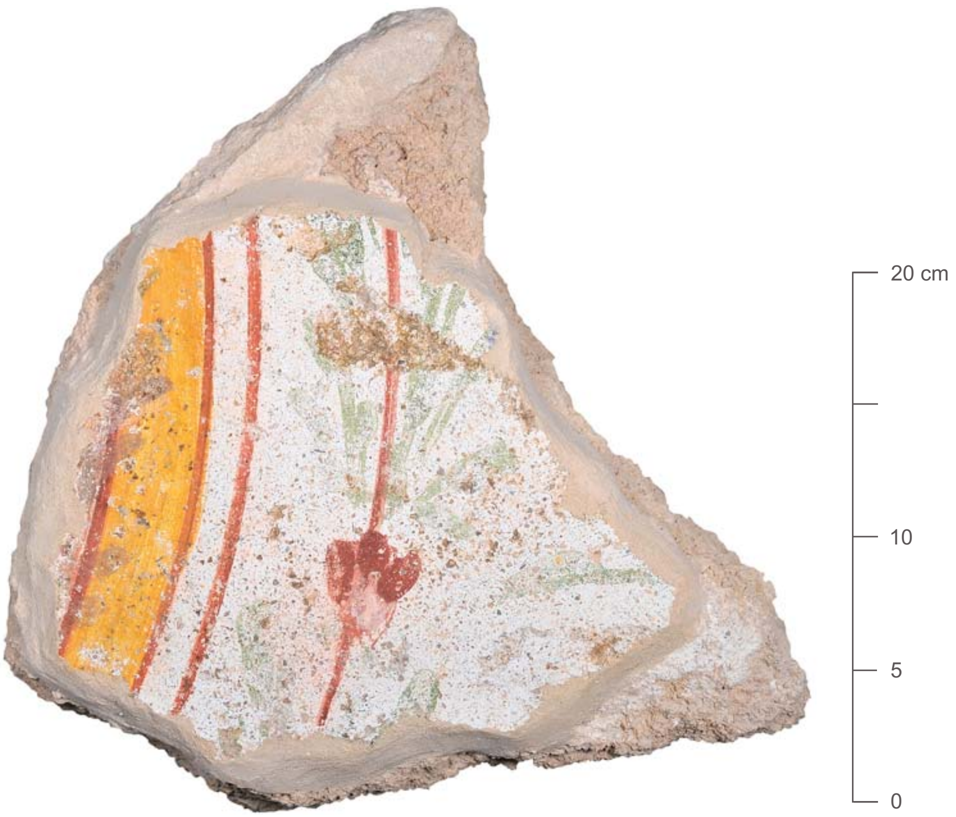
Cat. 68 *Inv. No.* 98506	*Representation* Medallion encircling a jeweled cross	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 x 10 (face) × 44 cm; roughly dressed ashlar; original position in the wall structure most likely vertical. *Condition*: good.	
Mortar/plaster	Plaster about 7 mm thick; directly on stone. *Condition*: minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to small preserved area of the painting; apparently thickly painted. *Condition*: good overall; minor abrasions and losses; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017)

Cat. 69 *Inv. Nos* JY10WP12 JY25WP12	*Representation* Medallion decorated with round shapes (fruit?), likely encircling a cross
	Provenance Residential district *Discovery / transport to Beiteddine* 2000s / 2012 (JY25WP12) / 2016 (JY10WP12)
Stone	33 × 53 (face) × 20 cm; large, well-dressed ashlar. *Condition*: found broken in two (separate inventory numbers), fresh break; otherwise in good condition.
Mortar/plaster	Type 2 mortar underneath the plaster; fragments of potsherds in the mortar. The plaster applied in two layers of similar composition; top layer 5–8 mm thick, lower layer 3–5 mm thick. *Condition*: detachment of the plaster along the break; surface abrasion; granular disintegration of plaster; green discoloration of plaster.
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poor; almost completely abraded; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; reassembling the two fragments; application of mortar bands; infilling joint between fragments; removal of surface grime; preventive consolidation of paint layer.

Cat. 70



After treatment (2017)

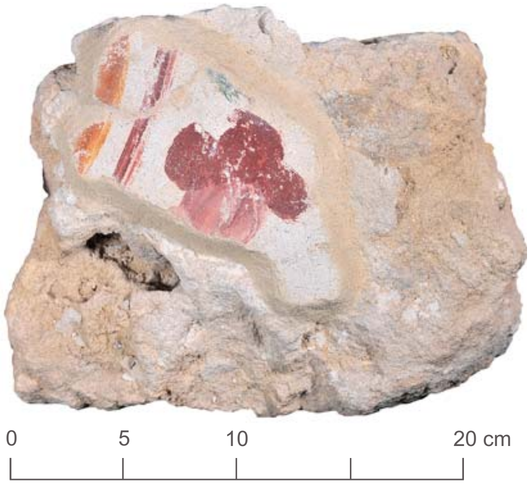
Cat. 70 *Inv. No.* 97008 ***Figs 3-8, 3-12***	*Representation* Outer rings of a medallion *Provenance*: Residential district *Discovery / transport to Beiteddine*: 1975 and again in 1987 / about 1987
Stone	30 × 30 (face) × 8 cm; irregular element; either an ashlar already broken at the time of construction or a fragment of fieldstone. *Condition*: right-hand side appears broken; back side trimmed; otherwise in good condition.
Mortar/plaster	Type 2 mortar remains along the left edge of the stone face. Plaster 12–15 mm thick; contains aggregate much larger than in other specimens. *Condition*: adhesion slightly weakened along the edges; surface pitted due to falling out of aggregate grains; shallow losses and abrasions; granular disintegration of plaster.
Paint layer	Buildup similar as in other depictions of medallions; yellow ring painted relatively thickly; some details preserved on top of it; flower painted thickly, wet-into-wet, whereas leaves rendered with single strokes of semi-opaque paint. *Condition*: good; minor abrasions and losses; dull, grayish varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.



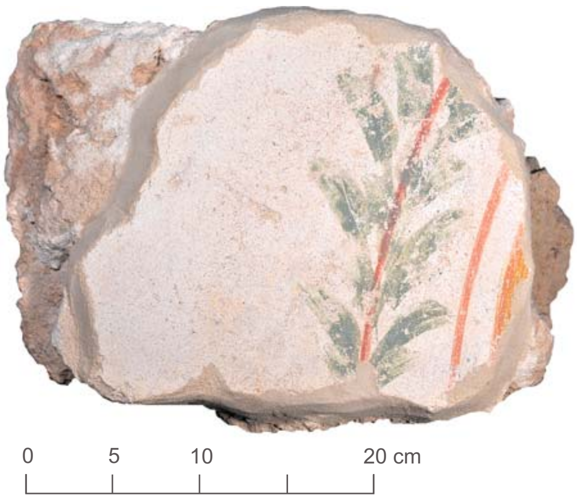
After treatment (2017)

Cat. 71 *Inv. No.* 97121	*Representation* Outer rings of a medallion	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 23 (face) × 8 cm; fragment of a roughly dressed ashlar. *Condition*: broken on one side, fresh break; back side trimmed; white and bluish fungi noted prior to conservation.	
Mortar/plaster	Type 2 mortar only on the right edge. Plaster 6–9 mm thick; directly on stone. *Condition*: jagged plaster edges; minor surface losses and abrasions; granular disintegration of plaster.	
Paint layer	Layered buildup; red flower rendered with three layers of color; yellow ring relatively thick, applied in one layer; leaves painted rather thinly with single brushstrokes. *Condition*: good overall save for minor losses; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 72, 73



After treatment (2017) *Cat. 72*



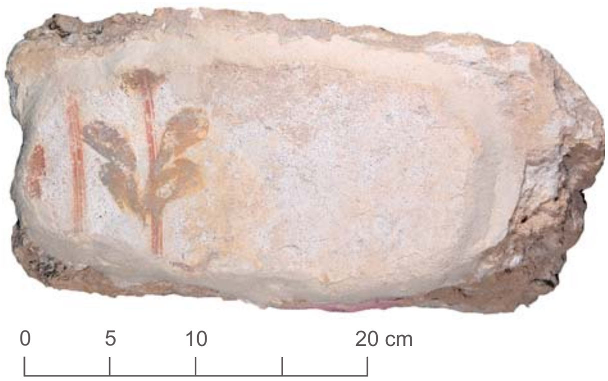
After treatment (2017) *Cat. 73*

Cat. 72 *Inv. No.* 98518	*Representation* Outer ring of a medallion(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	20 × 23 (face) × 16 cm; small, roughly dressed ashlar. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar underneath the plaster, on the sides, and in the cavities of the stone. Plaster 5–7 mm thick. *Condition*: good overall save for granular disintegration of plaster; a matching fragment of painted plaster was found loose among the detached fragments.	
Paint layer	Red flower painted wet-into-wet, thickly. *Condition*: good; minor abrasions and slight powdering of the red parts; dusty.	
Treatment	Disinfection; consolidation of plaster edges; reintegration of matching plaster fragment; application of mortar bands; dusting; consolidation of powdery paint layer.	

Cat. 73 *Inv. No.* 97104 *Sample* Jy023	*Representation* Outer rings of a medallion	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	20 × 30 (face) × 18 cm; roughly dressed ashlar. *Condition*: good; small, fresh-looking loss on one of the sides.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 7–10 mm thick. *Condition*: good; minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Green leaves rendered with single strokes of semi-opaque paint. *Condition*: good; minor losses, scuffs, and abrasions; slight powdering of red parts; dusty.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting; consolidation of powdery paint layer.	



After treatment (2018) *Cat. 74*



After treatment (2018) *Cat. 75*

Cat. 74 *Inv. No.* 98549	*Representation* Outer rings of a medallion	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	16 × 32 (face) × 40 cm; well-dressed ashlar; positioning in the wall structure possibly vertical. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and locally on the sides. Plaster 5–8 mm thick. *Condition*: shallow losses and abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: numerous abrasions and scuffs; appears faded; powdery; thin, yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 75 *Inv. No.* JY2WP	*Representation* Outer rings of a medallion	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	15 × 34 (face) × 36 cm; unshapely, roughly dressed ashlar; positioning in the wall structure possibly vertical. *Condition*: one of the back corners missing; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 6–9 mm thick. *Condition*: minor surface abrasions and cracks; granular disintegration of plaster.	
Paint layer	Leaves rendered with thick paint. *Condition*: minor losses and abrasions; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 76



After discovery (2005): top left, general view of the northeastern corner of a room (chapel?) adjoining the basilica on the south with preserved painted decoration; right, close-up of the tricolor ribbon on a narrow strip of painted plaster; bottom left, close-up of one of the wave-motifs

Cat. 76

Inv. No.
–

Representation
Wavy ribbon in pink, red, and yellow

Provenance
Room (chapel?) abutting the basilica on the south

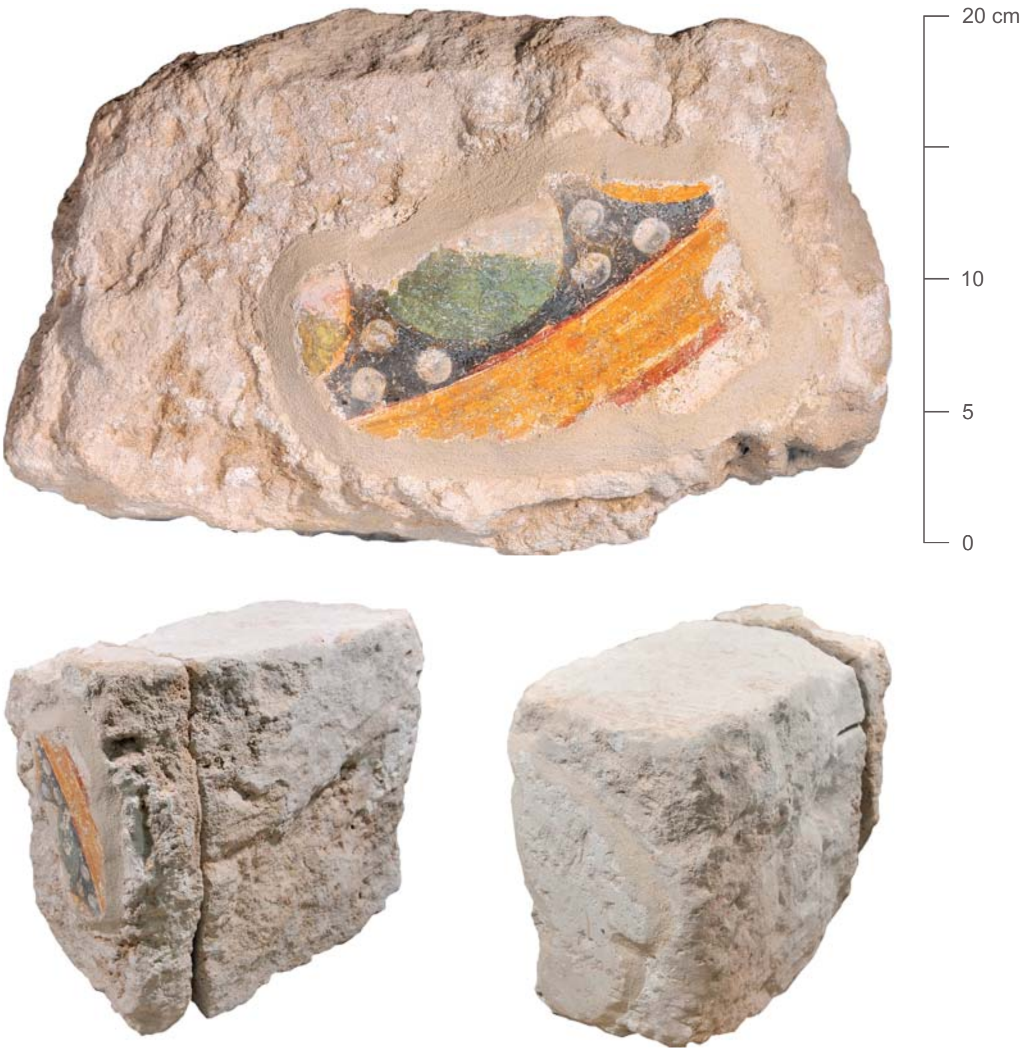
Discovery / transport to Beiteddine
1987 and again in 2000s / –



After treatment (2019)

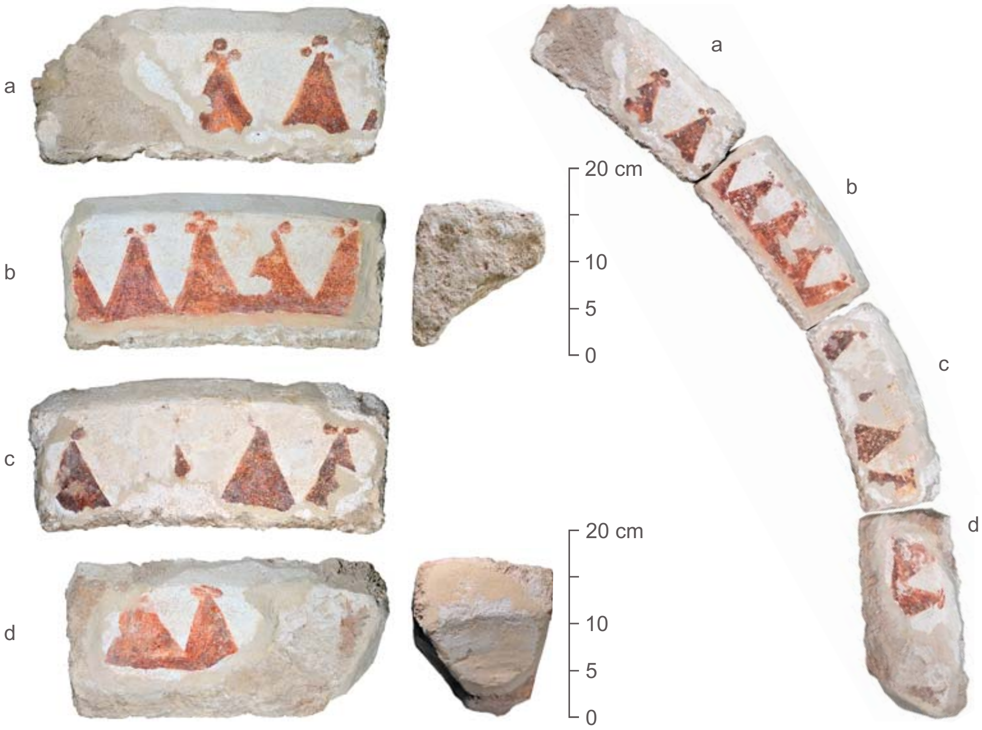
Cat. 77 *Inv. No.* 97095 *Samples* Jy032, Jy033	*Representation* Gemmed band consisting of overlapping red, orange, and green disks; tip of a peacock's train against a white background	
Figs *3-18, 4-18B, 6-7*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 46 (face) × 8/19 (top/bottom) cm; dressed, cornice-like element with a projecting profile; porous stone. *Condition*: fresh-looking loss in the central part of the profile; back side trimmed.	
Mortar/plaster	Type 2 mortar along the perimeter of the stone. Plaster applied to the face and to the profile; for the most part directly on stone; plaster 7–12 mm thick on the face and 4–5 mm on the profile. *Condition*: detachment of plaster in the peacock's train and in the left yellow gem; many broad and shallow losses on the profile; granular disintegration of plaster.	
Paint layer	Layered buildup evident in the train; gems executed with very thick paint applied wet-into-wet; white dots made with thick impastos on a thinly painted black background; overlapping of gem contours indicates painting direction from right to left. *Condition*: good overall; minor losses and abrasions; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.	

Cat. 78



After treatment (2018); bottom, ashlar face reassembled with the rest of the stone; viewed from two angles (2018)

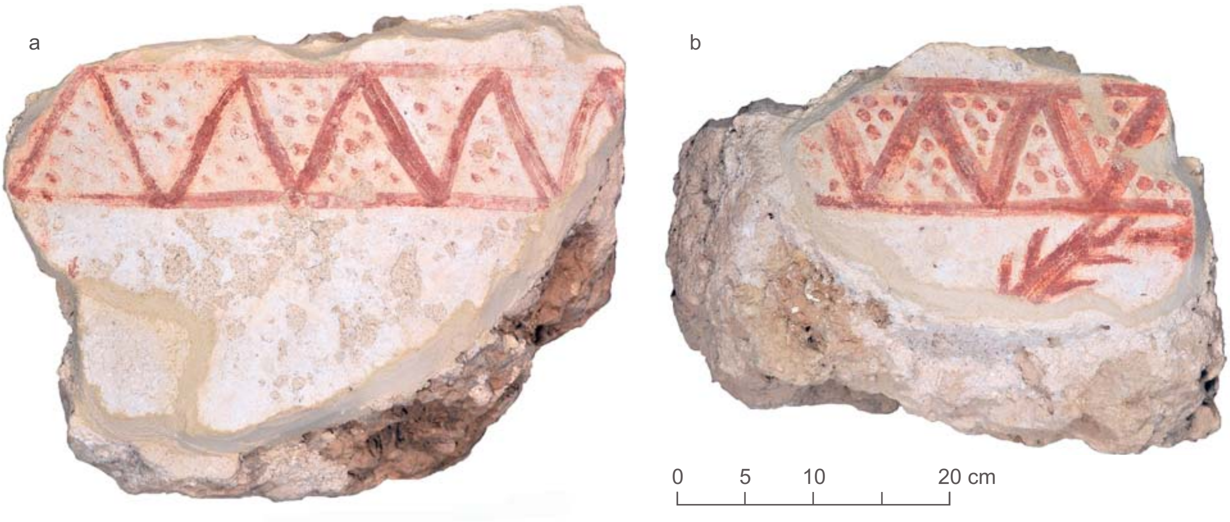
Cat. 78 *Inv. Nos* 97097 97143	*Representation* Gemmed band following a circular contour; possibly fragment of a gemmed medallion	
Figs ***4-8, 6-10***	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 21 (face) × 40 cm; slightly irregular ashlar. *Condition*: painted face cut from the bulk of the ashlar; the condition of both elements otherwise good.	
Mortar/plaster	Type 2 mortar along the perimeter of the plaster. Plaster on two opposite sides of the ashlar, the other side plain. *Condition*: slightly weakened adhesion along the edges; minor losses; granular disintegration of plaster.	
Paint layer	Gemstones painted thickly, in superimposed layers; yellow ring executed with broad semi-opaque brushstrokes. *Condition*: good overall; black parts slightly powdery; partly coated with yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	



After treatment (***d*** – 2018; ***a, b, c*** – 2019); right, sequential arrangement of the hoodmold (2017)

Cat. 79 *Inv. Nos* *a* – 97004 *b* – 97007 *c* – 97005 *d* – 97006	*Representation* Elements of a hoodmold decorated with red triangles, each surmounted with a trefoil made of three small dots	
Samples *b* – Jy022 *c* – Jy042 [*Fig. 4-17D*] *b – Figs 4-18B, 6-3* *b, c, d – Fig. 6-6*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	Slightly curved elements with a triangular profile; well-dressed; ***a*** – 13 × 34 (face) × 5/12 cm; ***b*** – 12 × 33 (face) × 5/13 cm; ***c*** – 13 × 36 (face) × 5/11 cm; ***d*** – 13 × 34 (face) × 5/13 cm; with an oblique ending (label stop). *Condition*: all fragments had the back side trimmed; chipping; otherwise in good condition.	
Mortar/plaster	Type 2 mortar along the perimeter of the stone faces. Plaster about 7 mm thick; directly on stone. *Condition*: jagged plaster edges; broad and shallow losses; granular disintegration of plaster.	
Paint layer	Applied in one, relatively thick layer; less than perfect execution considering the irregular sizes and spacing of elements of the pattern. *Condition*: losses and abrasions; scuffs; yellowed varnish; powdery paint under the varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 80



After treatment (2017)

Cat. 80 *Inv. Nos* *a* – JY75WP *b* – JY107WP	*Representation* Red zigzag between two horizontal lines; the triangles created by the zigzag filled with dabs of red paint, ***b*** – fragment of a wreath	
a – Fig. 3-28	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	***a*** – 34 × 43 (face) × 20 cm; originally well-dressed ashlar; ***b*** – 32 × 41 (face) × 27 cm; large, undressed fieldstone with many cavities and surface irregularities. *Condition*: ***a*** – one corner missing, covered with mortar, indicating damage prior to use in construction; ***b*** – good.	
Mortar/plaster	***a***, ***b*** – Type 2 mortar on the sides of the stone and locally underneath the plaster; remains of Type 1 mortar on one of the sides; in addition, white mortar with large aggregate and organic temper unrecorded on any other specimens. Plaster about 5 mm thick; surface gouges made when the plaster was still fresh. *Condition*: ***a*** – slightly weakened adhesion along the perimeter of the plaster; losses of various sizes and depths; ***b*** – minor losses and abrasions; fragment of plaster broken off and loose; ***a***, ***b*** – granular disintegration of plaster.	
Paint layer	Applied in one layer on fresh plaster (brushmarks in plaster on fragment ***a***); pattern execution careless. *Condition*: abrasions and losses; sensitive and powdery; very dusty; ***b*** – surface grime.	
Treatment	Disinfection; ***a*** – consolidation of plaster edges and abraded areas; application of mortar bands; dusting; consolidation of powdery paint layer; ***b*** – consolidation of plaster edges; reintegration of broken plaster fragment; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2018)

Cat. 81 *Inv. No.* 97109	*Representation* Pier-like element(?) decorated with laurel-shaped elements or imitation of marble(?)	
Fig. 3-30	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	34 × 24 (face) × 15 cm; front dressed, back side shapeless. *Condition*: missing corner, likely old damage; some chipping.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 5–7 mm thick; folded over the right-hand edge, continuing on the side of the ashlar. *Condition*: good overall; minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Layered buildup; details executed on top of the ocher background pulled with a wide brush; intentional splashes of paint. *Condition*: good; minor losses and abrasions; small area coated with yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.	

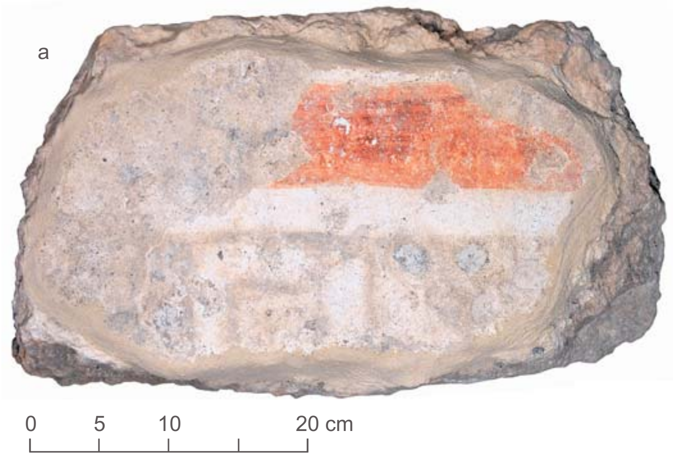
Cat. 82





After treatment (2017); bottom, plaster folded over the bottom left corner of the ashlar (2017)

Cat. 82 *Inv. No.* 98515	*Representation* Yellow band with repetitive pattern of alternating off-white circles with dark red contours and pairs of white dabs between them; reminiscent of the rendering of precious stones on jeweled crosses; dark red, broken outline	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	27 × 35 (face) × 13 cm; front well-dressed, back side shapeless. *Condition*: good; the missing corner seems to be old damage.	
Mortar/plaster	Type 2 mortar along the perimeter of the stone face. Plaster 6–8 mm thick; folded over the bottom left corner where it appears to be slightly concave. *Condition*: jagged plaster edges; minor losses; granular disintegration of plaster.	
Paint layer	Layered buildup, similar to the treatment of jeweled crosses. *Condition*: minor losses and abrasions; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	







After treatment (2017); bottom, ***Cat. 83a***: keying marks viewed in raking light

Cat. 83 *Inv. Nos* ***a*** – JY13WP12 ***b*** – A38	*Representation* Gray (once possibly black) geometric motif consisting of squares and triangles; wide red band parallel to the motif	
	Provenance Residential district	*Discovery / transport to Beiteddine* ***a*** – 1975 and again in 2000s / 2016 ***b*** – 2000s / 2016
Stone	***a*** – 26 × 46 (face) × 21 cm; roughly dressed ashlar. ***b*** – 30 × 36 (face) × 14 cm; shapeless, although originally dressed; possibly reused in construction in damaged form. *Condition*: good, apart from old damage.	
Mortar/plaster	***a*** – Type 2 mortar underneath the plaster. Plaster 8–10 mm thick; ***b*** – Type 2 mortar filling irregularities and cavities of the stone. Plaster 10–15 mm thick. *Condition*: ***a*** – relatively good; evidence of keying; minor losses and abrasions; granular disintegration of plaster. ***b*** – severely damaged surface; numerous pits and losses; granular disintegration of plaster; specks of black microorganisms (moss?) on the surface.	
Paint layer	***a***, ***b*** – applied rather thinly in one layer; ***a*** – remains of white impastos on the gray. *Condition*: ***a*** – faded and abraded; red part slightly powdery; locally remains of transparent, glossy varnish; surface grime. ***b*** – poorly preserved due to the condition of the plaster; faded and abraded; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of paint layer; removal of varnish (***a***).	

Cat. 84, 85



After discovery (1975)

Cat. 84	*Representation*	
Inv. No.	Imago clipeata with a bearded, haloed figure dressed in a tunic with clavi and a cloak	
–	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –



After discovery (1975)

Cat. 85	*Representation*	
Inv. No.	Elderly, bearded man with a halo; his left hand can be seen at the right edge of the depiction; possibly represented as an orans	
–	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –



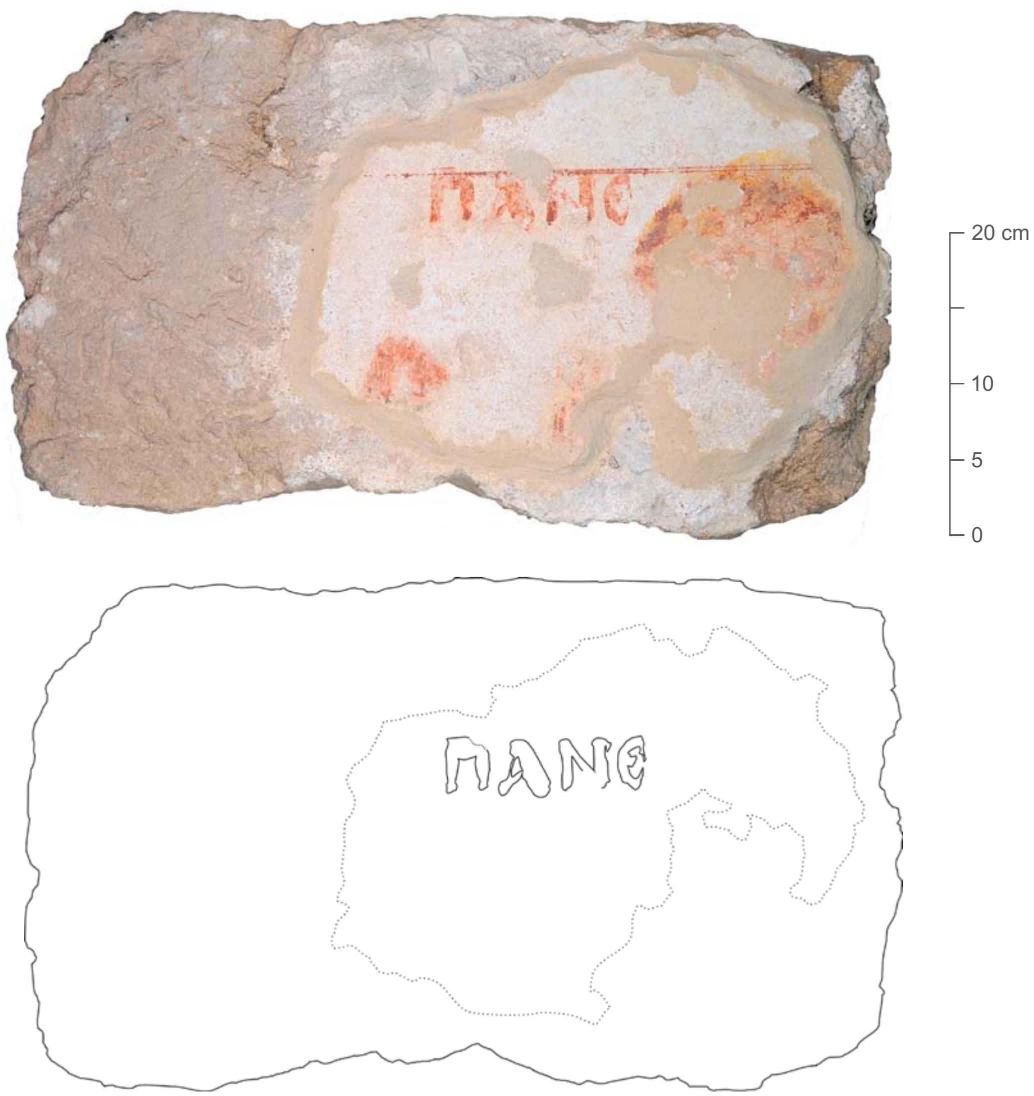
After discovery (1975)

Cat. 86 *Inv. No.* –	*Representation* Torso, left arm, neck and chin of a person, most likely male; an orans(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –



Cat. 87 *Inv. No.* –	*Representation* Beardless young man, with a halo(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –

Cat. 88



After treatment (2017) and tracing

Cat. 88 *Inv. No.* 98564	*Representation* Upper half of the head and possibly right hand of a frontally rendered figure; possible depiction of an orans; *titulus* reading ΠΑΝΕ left of the person's head Letter height 5 cm
Fig. 3-17 Chapter 5: 218	*Provenance* Basilica *Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 56 (face) × 22 cm; large, well-dressed ashlar. *Condition*: corners slightly rounded, otherwise in good condition.
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 6–9 mm thick. *Condition*: numerous surface losses and abrasions; jagged plaster edges; granular disintegration of plaster.
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poor; abraded, very powdery paint suffused over the surface; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.



After discovery (1975)

Cat. 89
Inv. No.
–

Representation
Human figure, in a genre(?) scene

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975)

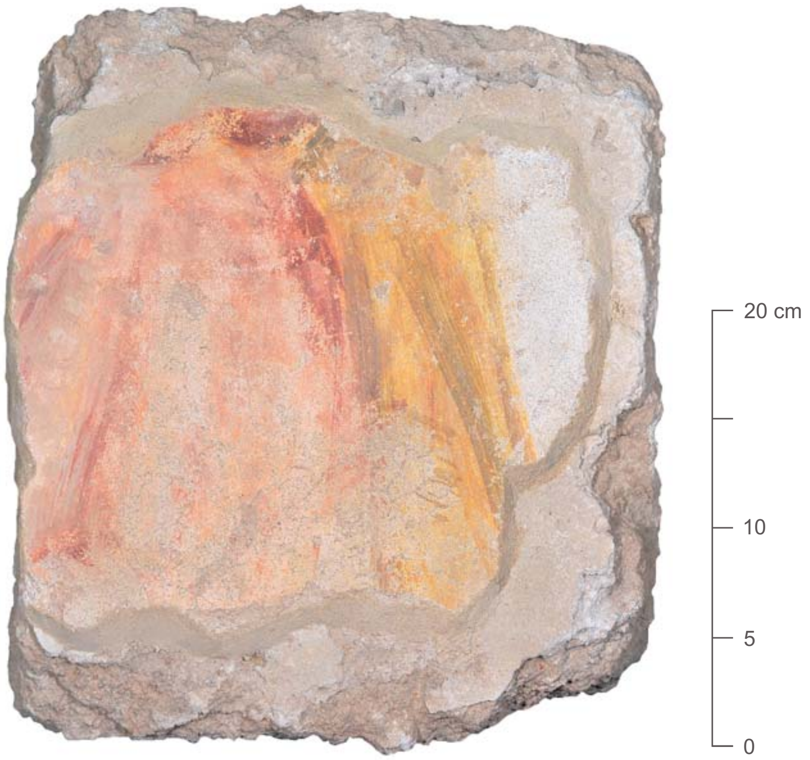
Cat. 90
Inv. No.
–

Representation
A person and an animal(?); fragment of a genre(?) scene

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –

Cat. 91

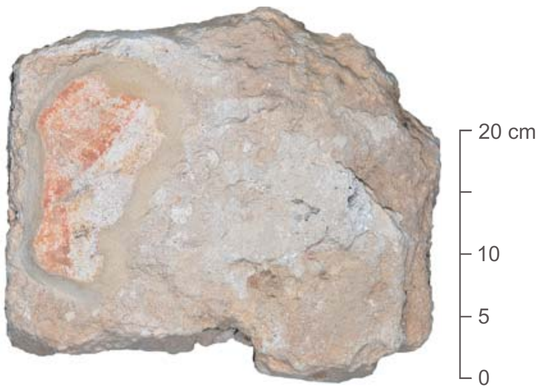


After treatment (2017)

Cat. 91 *Inv. No.* 98493	*Representation* Yellow and pink draped garments(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 30 (face) × 19 cm; well-dressed ashlar. *Condition*: fresh-looking damage to the back side.	
Mortar/plaster	Type 1 mortar applied in an even layer. Plaster 7 mm thick. *Condition*: adhesion slightly weakened along the perimeter of the plaster; abrasions and cracks; granular disintegration of plaster.	
Paint layer	Painted wet-into-wet, with broad, quick brushstrokes. *Condition*: abraded but legible; pink areas slightly powdery; candle-wax stain by the upper edge; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; partial removal of wax; consolidation of powdery paint layer.	



After treatment (2018) *Cat. 92*



After treatment (2017) *Cat. 93*

Cat. 92 *Inv. No.* 98486	*Representation* Draped garment(?)	
Figs 4-6, 4-14, 4-28	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	31 × 45 (face) × 8 cm; well-dressed ashlar; porous stone. *Condition*: back side trimmed, otherwise in good condition.	
Mortar/plaster	Type 2 mortar in a strip along the perimeter of the ashlar face. Plaster 7–9 mm thick. *Condition*: poor adhesion along the perimeter of the plaster; rough, abraded surface; some cracks; granular disintegration of plaster.	
Paint layer	Layered buildup; dark red lines applied with thick paint; well-preserved texture of brushstrokes. *Condition*: abraded and faded; red parts powdery; a large stain of melted candle wax spilled over the stone; some remains of yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; removal of varnish; complete extraction of wax proved impossible; consolidation of powdery paint layer.	

Cat. 93 *Inv. No.* 98528	*Representation* Human limb(?)	
Sample Jy005 [*Fig. 3-4*]	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	28 × 34 (face) × 17 cm; roughly dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 1 mortar on the face of the ashlar; Type 2 mortar on the sides. Plaster 8–10 mm thick. *Condition*: poor; losses and abrasions; granular disintegration of plaster.	
Paint layer	Appears to be applied thickly, wet-into-wet. *Condition*: numerous small losses; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 94



After treatment (2017); detail of *Cat. 94*

Cat. 94 *Inv. No.* 98485	*Representation* Peacock between clumps of generic plants	
Figs 3-19, 3-29, 4-5, 4-18B, 4-21, 6-1, 6-22	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	41 × 75/33 (top/bottom) (face) × 11 cm; well-dressed element with the curvature of an arch cut into it; porous stone with marked sedimentary layers. *Condition*: crumbly; chipping; back side trimmed.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face. Plaster 5–10 mm thick; surface slightly undulating. *Condition*: weak adhesion along the edges; remains of epoxy(?) resin along the bottom edge of plaster; minor, shallow losses concentrated on the head and flank; granular disintegration of plaster.	
Paint layer	Layered buildup; evidence of preparatory sketch executed with ocher; thickly applied paint, especially blue and green; colors of the details do not mix with the base colors (e.g. on the train or flank); brush marks visible in raking light [see *Fig. 3-29*]. *Condition*: minor, scattered losses and abrasions; moderately yellowed, glossy varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.	

Cat. 94



After treatment (2017)

Cat. 95



After discovery (1975)

Cat. 95 *Inv. No.* –	*Representation* Peacock facing a plant	
Fig. 6-22	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –



After treatment (2018)

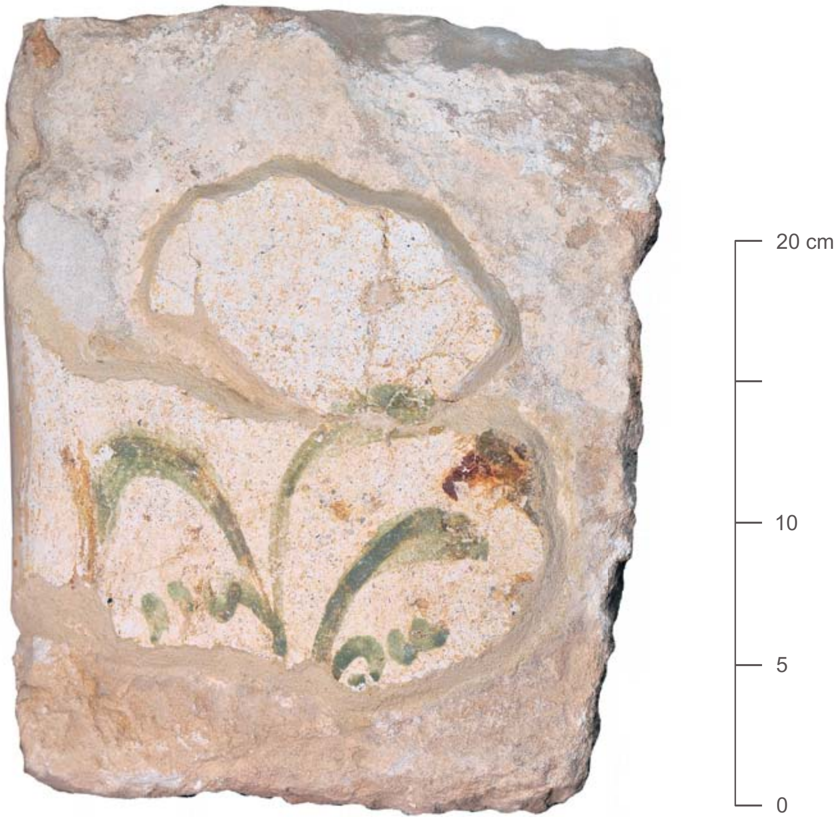
Cat. 96 *Inv. No.* JY160WP	*Representation* Peacock(?); generic plant in the background	
Figs 3-31, 6-22	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	37 × 27 (face) × 11 cm; well-dressed ashlar; rough, porous stone. *Condition*: minor chipping; rounded corners.	
Mortar/plaster	Type 2 mortar on the sides. Plaster 5–8 mm thick; directly on stone. *Condition*: some surface losses and abrasions; granular disintegration of plaster.	
Paint layer	Applied relatively thickly, except for the plant, wet-into-wet; paint handling quick and disorderly. *Condition*: numerous losses and abrasions; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 97



After treatment (2017)

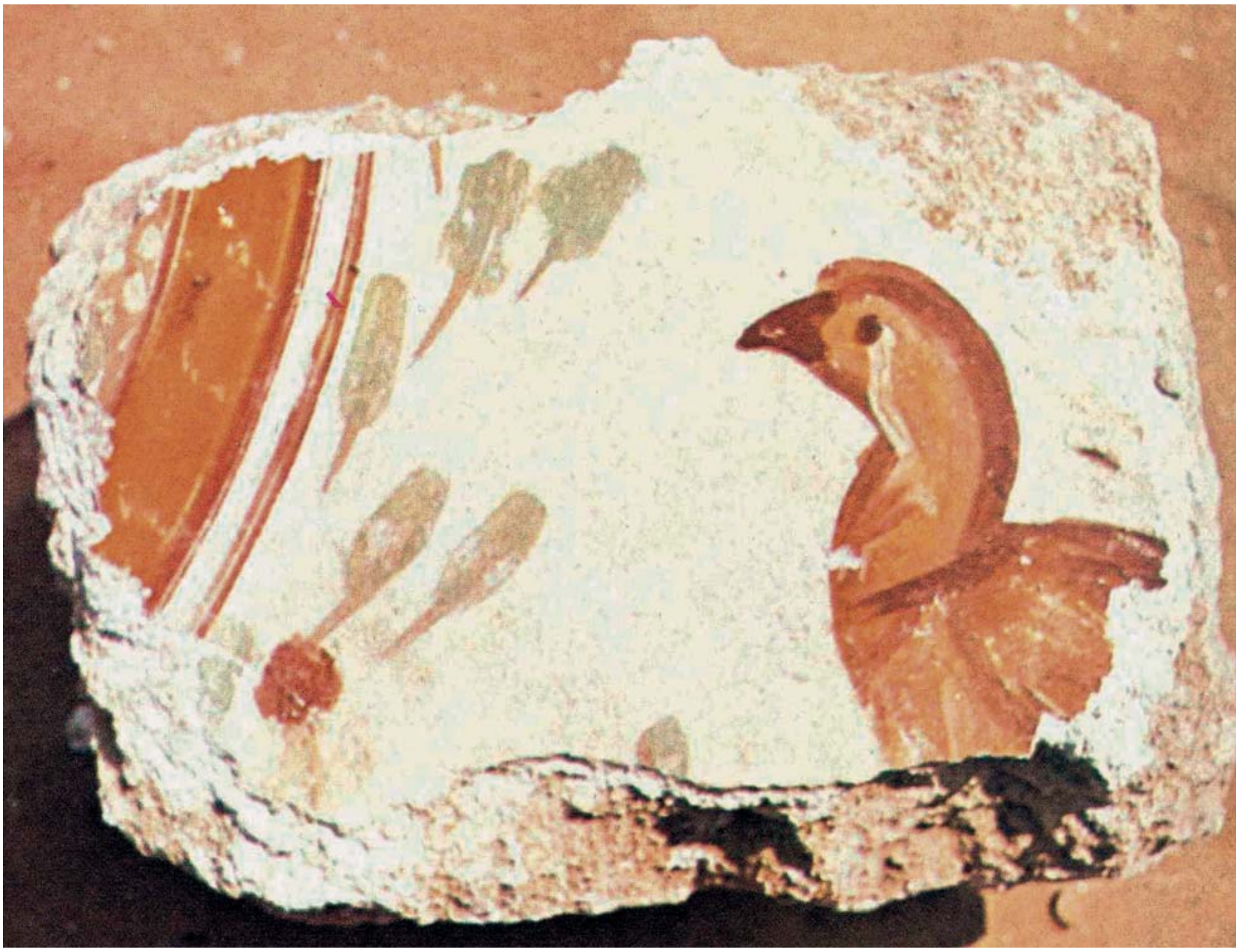
Cat. 97 *Inv. No.* 98516 *Sample* Jy040 [*Fig. 4-17C, D*]	*Representation* Partridge pecking on a plant; pendant to *Cat. 98*	
Figs 3-19, 3-20, 4-15, 4-20, 4-29, 6-9, 6-22	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35.5 × 29 (face) × 9 cm; well-dressed element. *Condition*: rounded corners; back side trimmed.	
Mortar/plaster	Plaster 4–10 mm thick; directly on stone; folded over the right-hand edge and continuing on the side. *Condition*: poor adhesion in the lower part of the representation; matching fragment of plaster was found detached in the storage room; cracks; granular disintegration of plaster.	
Paint layer	Layered buildup; evidence of preparatory sketch with ocher; paints rather opaque and thick; easy and skillful execution of details of the plumage and of the plant tendril. *Condition*: good overall; moderately yellowed, thick, glossy varnish; surface grime; mortar-like hard incrustations on the surface.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; reintegration of broken plaster fragment; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of red and black paint layer.	



After treatment (2017)

Cat. 98 *Inv. No.* 97111 *Sample* Jy041 [*Fig. 4-17D*]	*Representation* Partridge pecking on a plant; pendant to *Cat. 97*	
Figs 4-22, 6-9	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	28 × 23 (face) × 9 cm; well-dressed element. *Condition*: rounded corners; back side trimmed.	
Mortar/plaster	Type 2 mortar remains on the ashlar face. Plaster 4–10 mm thick; folding over the left-hand edge and continuing on the side. *Condition*: slight detachment in the area of the head; several loose, matching fragments of plaster found in the storage room; granular disintegration of plaster.	
Paint layer	Paint handling as in *Cat. 97*. *Condition*: good overall; yellowed, thick, glossy varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; reintegration of broken plaster fragments; application of mortar; removal of surface grime; removal of varnish; preventive consolidation of red paint layer.	

Cat. 99



After discovery (1975)

Cat. 99 *Inv. No.* –	*Representation* Partridge facing a medallion plausibly encircling a representation of a cross	
Fig. 6-22	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –



After treatment (2017)

Cat. 100 *Inv. Nos* 97002	*Representation* Two pigeon-like birds pecking on the ground among clumps of plants	
Figs 4-13, 4-18B, 4-28	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 41 (face) × 19 cm; well-dressed ashlar once. *Condition*: good; large loss on the back, possibly prior to construction.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar and partly underneath the plaster. Plaster 5–10 mm thick. *Condition*: some deep losses and abrasions; cracked upper right corner; remains of epoxy(?) resin on the edges; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to surface abrasion; apparently moderately thick. *Condition*: abraded, faded and sensitive; minor losses; thick surface grime; hard, sand incrustation in upper left corner.	
Treatment	Disinfection; consolidation of plaster edges; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; preventive consolidation of paint layer; infilling losses of plaster; inpainting.	

Cat. 101, 102



After discovery (1975)

Cat. 101	*Representation*	
Inv. No.	Pink wading bird, plausibly a flamingo; foliage(?) on left	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –



After discovery (1975)

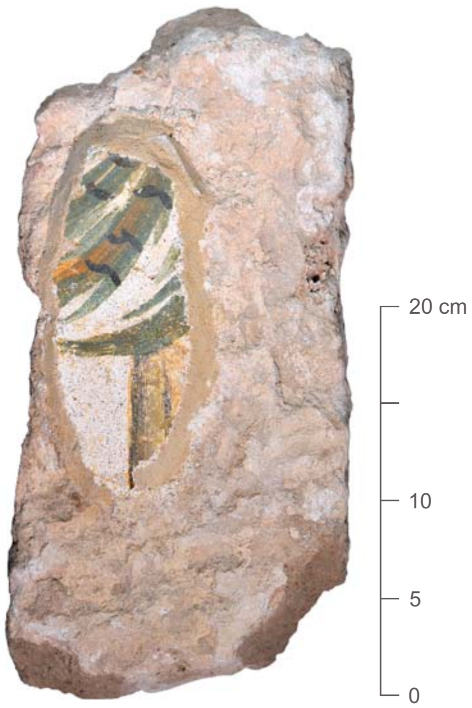
Cat. 102	*Representation*	
Inv. No.	Gray wading bird with red legs and down-curved red bill, pecking on a gray, vertical shape	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –



After discovery (1975)

Cat. 103	*Representation*	
Inv. No.	Blue (or bluish-green) parakeet-like bird with ocher flank, standing on a strip of ground	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –

Cat. 104, 105



After treatment (2018) *Cat. 104*


After discovery (1975) *Cat. 105*

Cat. 104

Inv. No. 97141

Representation
Bottle-green tail feathers with black streaks, possibly representation of a pheasant; vertical brown element below the feathers

Provenance	*Discovery / transport to Beiteddine*
Basilica	1987 / about 1987

Stone	34 × 16 (face) × 6 cm; header(?). *Condition*: possible break along one of the edges (probably old damage); one corner missing, fresh break; back side trimmed.
Mortar/plaster	Type 2 mortar preserved in a strip along the perimeter of the stone face. Plaster about 7 mm thick, for the most part directly on stone; potsherd in the plaster. *Condition*: good overall; granular disintegration of plaster.
Paint layer	Layered buildup; base color of the feathers painted with semi-transparent strokes; black streaks on top; paint relatively thick; visible brushstrokes; coarsely ground green pigment. *Condition*: good overall; a few minor flakes in the vertical, brown element, possibly caused by contraction of the very yellowed, thick varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of black paint layer; infilling losses of plaster; inpainting.

Cat. 105

Inv. No. –

Representation
Red bird, very similar to *Cat. 10*

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –

Cat. 106, 107



After discovery (1975) *Cat. 106*



After treatment (2018) and tracing *Cat. 107*

Cat. 106 *Inv. No.* –	*Representation* Small bird with spotted flank, standing on a strip of red ground and facing an item, possibly a plant	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –

Cat. 107 *Inv. No.* 98490	*Representation* Red pigeon-like bird	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 58 (face) × 20 cm; large, well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar in large quantities adhering to the sides of the ashlar; some mortar visible underneath the plaster. Plaster 8–12 mm thick. *Condition*: more than half of the extant plaster is severely abraded; granular disintegration of plaster.	
Paint layer	Applied in one layer, with fluency and ease; no evidence of corrections of the bird's shape. *Condition*: poorly preserved; very sensitive and powdery; thin, yellowed varnish; surface grime; some hard, mortar-like incrustations on the right side.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 108







After treatment (2017); bottom, close-up after discovery (1975)

<table>
<tr><td>Cat. 108
Inv. No.
JY24WP12

Sample
Jy037
[Fig. 4-17A]</td><td colspan="2">Representation
Bird standing next to a decorative base of a cross(?)</td></tr>
<tr><td>Fig. 4-16</td><td>Provenance
Residential district</td><td>Discovery / transport to Beiteddine
1975 and again in 2000s / 2012</td></tr>
<tr><td>Stone</td><td colspan="2">36 × 52 (face) × 17 cm; well-dressed; old plaster on the right side of the ashlar suggesting secondary use.
Condition: good.</td></tr>
<tr><td>Mortar/plaster</td><td colspan="2">Type 2 mortar or old plaster on the face of the ashlar. Top plaster is 7–12 mm thick.
Condition: poor adhesion along the top edge; small losses of plaster and surface abrasion; granular disintegration of plaster.</td></tr>
<tr><td>Paint layer</td><td colspan="2">Buildup difficult to assess due to the condition of the painting; possibly relatively thick at first.
Condition: many abrasions and minor losses; dull gray varnish; surface grime.</td></tr>
<tr><td>Treatment</td><td colspan="2">Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.</td></tr>
</table>



After discovery (1975)

Cat. 109 *Inv. No.* –	*Representation* A fish, possibly hanging from a string	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –

Cat. 110



After treatment (2018) and tracing

Cat. 110

Inv. Nos
a – 98556
b – 97128, 98513

b – Figs 3-11, 3-29, 4-18C

Representation
Buff-colored animal, most probably a lamb or ram(?), standing among plants and nibbling at a plant

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone

Two well-dressed ashlars: ***a*** – 38 × 58 (face) × 8 cm; ***b*** – 34 × 62 (face) × 7 cm.
Condition: back side of both ashlars trimmed.
a – upper left corner missing, break apparently fresh. ***b*** – broken into fragments; breaks in the lower right corner fresh; trimming the stone could have caused a break separating the larger part of the ashlar from the other pieces.

Mortar/plaster

Type 2 mortar locally underneath the plaster and in the cavities of the stone. Plaster 5–9 mm thick.
Condition: severe granular disintegration of plaster. ***a*** – numerous shallow losses of various sizes; most of them either predating or coinciding with the time of discovery because of an old varnish applied over these losses.
b – losses and abrasions, although less severe than on fragment ***a***; jagged plaster edges; remains of epoxy(?) resin along the edges.

Paint layer

Layered buildup; base buff color executed with opaque paint; strokes of a wide brush seen in raking light; details executed with darker color and fine brushes.
Condition: ***a*** – poor due to the condition of the plaster; surface badly abraded, as revealed after removal of a thick layer of very yellowed varnish; hard incrustations of dirt on the surface; surface grime.
b – relatively good save for a number of losses, abrasions and scuffs; matte, yellowed varnish; surface grime.

Treatment

Disinfection; consolidation of plaster edges and abraded areas; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer; infilling losses of plaster; inpainting. ***b*** – reassembling three small fragments on the right side of the ashlar; filling joints between the fragments. The two main elements of the ashlar could not be reassembled due to their thinness, a damaged break, and the very small contact area between the two parts.



After discovery (1975) *Cat. 111*



After treatment (2018) *Cat. 112*

Cat. 111

Inv. No.
–

Representation
Reddish-brown animal with dashes of dark red on its coat; possibly a lamb raising its foreleg in heraldic pose; generic plants underneath and in front of the animal

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –

Cat. 112

Inv. No.
JY63WP

Representation
Doe(?) with raised head reaching for a green plant

Provenance	*Discovery / transport to Beiteddine*
Residential district	2000s / 2012

Stone	35 × 35 (face) × 17 cm; well-dressed front of the stone, somewhat unshapely back side. *Condition*: minor chipping; one corner rounded.
Mortar/plaster	Type 1 mortar on the sides of the ashlar; Type 2 mortar on the back. Plaster about 7 mm thick; directly on stone. *Condition*: numerous cracks in the plaster; poor adhesion in the area of the head; jagged plaster edges; shallow losses and abrasions; granular disintegration of plaster.
Paint layer	Base color of the coat applied with wide brushes, in one, relatively thin layer; details of the pelage executed with impastos applied wet-into-wet. *Condition*: minor losses and abrasions, especially to the plant; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; preventive consolidation of paint layer; infilling losses of plaster; inpainting.

Cat. 113, 114



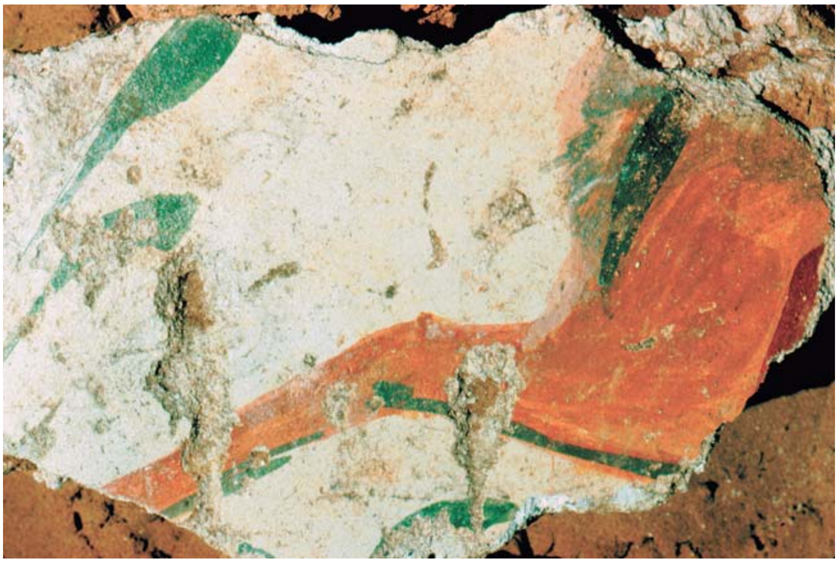
After discovery (1975)

Cat. 113

Inv. No.
–

Representation
Foreleg of a buff-colored animal, possibly a stag, lamb or gazelle, standing among generic plants

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –



After discovery (1975)

Cat. 114

Inv. No.
–

Representation
Hind leg of an animal, possibly a stag, antelope or gazelle, running among generic plants

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –



After treatment (2018) *Cat. 115*

Cat. 115 *Inv. No.* 97114	*Representation* Hind leg of an animal, possibly a stag, antelope or gazelle, striding or running among generic plants	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 35 (face) × 11 cm; roughly dressed ashlar; porous stone. *Condition*: upper left corner missing, break apparently fresh; back side trimmed.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster about 7 mm thick. *Condition*: a few deep losses; some abrasions and minor cracks; remains of epoxy(?) resin used in the past to reattach plaster; granular disintegration of plaster.	
Paint layer	Applied in no more than two layers, with wide, fluent brushstrokes; relatively thick and opaque. *Condition*: numerous losses, scuffs, and abrasions; sensitive, especially the areas of buff color; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 116, 117



After discovery (1975)

Cat. 116	*Representation*	
Inv. No.	Haunch of a buff-colored animal with a small tail, possibly a gazelle	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –



After discovery (1975)

Cat. 117	*Representation*	
Inv. No.	Haunch of a buff-colored animal with a small tail, possibly a gazelle	
–	*Provenance*	*Discovery / transport to Beiteddine*
	Residential district	1975 / –



After treatment (2018)

Cat. 118 *Inv. No.* JY87WP	*Representation* Male lion, facing right	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	34 × 54 (face) × 27 cm; ashlar; porous stone. *Condition*: several chip losses; corners rounded; otherwise in good condition.	
Mortar/plaster	Type 2 mortar locally underneath the plaster; two layers along the left edge. Plaster about 7 mm thick. *Condition*: poor adhesion in the area of the head; large, deep losses of plaster; small abrasions; granular disintegration of plaster.	
Paint layer	Executed wet-into-wet with broad, quick, somewhat disordered brushstrokes; most of the colors are semi-opaque save for a pink highlight(?) corresponding to the lion's chest. *Condition*: losses, scuffs, and abrasions all over; red mane slightly powdery; surface grime; some solid dirt deposits.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 119



After treatment (2018)

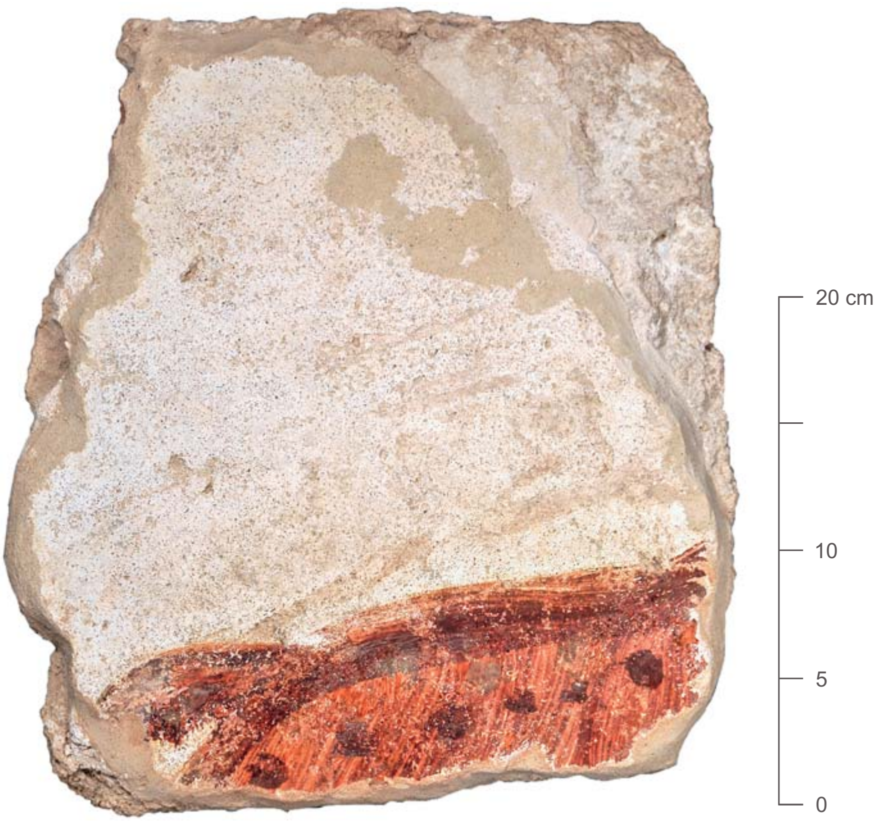
Cat. 119 *Inv. No.* JY58WP	*Representation* Lioness facing a green plant	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	34 × 34.5 (face) × 15 cm; well-dressed ashlar; rough, porous stone. *Condition*: corners slightly rounded; otherwise in good condition.	
Mortar/plaster	Type 1 mortar on the sides of the stone and locally underneath the plaster. Plaster 5–8 mm thick; directly on stone. *Condition*: poor adhesion along the edges; cracks and losses of plaster; granular disintegration of plaster.	
Paint layer	Base color of the pelage rendered with solid, relatively thick paint; anatomical details applied wet-into-wet with rather disordered brushstrokes; teeth marked with white impastos. *Condition*: minor losses and abrasions, especially on the muzzle; a large loss in the eye; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2018)

Cat. 120 *Inv. No.* JY79WP *Fig. 3-31*	*Representation* Unidentified animal looking left; small rounded ear and relatively long neck *Provenance*: Residential district *Discovery / transport to Beiteddine*: 2000s / 2012
Stone	33 × 40 (face) × 15 cm; well-dressed ashlar; compact stone. *Condition*: good overall; minor chipping.
Mortar/plaster	Type 2 mortar underneath the plaster along the left edge; Type 1 mortar on the bottom side of the ashlar. Plaster 5–8 mm thick. *Condition*: poor adhesion along the edges; abrasions, losses, and cracks; granular disintegration of plaster.
Paint layer	Base color of the pelage rendered with relatively thin paint; anatomical details applied wet-into-wet with disordered brushstrokes and somewhat random, mixed colors. *Condition*: numerous losses, scuffs, and abrasions; reddish-brown parts sensitive and powdery; surface grime.
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.

Cat. 121



After treatment (2018)

Cat. 121 *Inv. No.* 97116	*Representation* Haunch of an animal with spotted red coat and small fluffy tail	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 28 (face) × 9 cm; moderately dressed ashlar. *Condition*: right side broken, possibly old damage; corners rounded; back side trimmed.	
Mortar/plaster	Type 2 mortar underneath the plaster; likely in two layers on the right side of the ashlar; potsherd noted between mortar and plaster. Plaster 5–7 mm thick, even. *Condition*: relatively good; some minor losses and scuffs; granular disintegration of plaster.	
Paint layer	Applied in no more than two layers; base color pulled with wide brush and semi-transparent paint; darker contours and spots on the pelage rendered with thick, opaque paint. *Condition*: minor losses and abrasions scattered all over; remains of slightly yellowed varnish; surface grime; hard, mortar-like deposits firmly adhering to the surface.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.	



After treatment (2018) *Cat. 122*

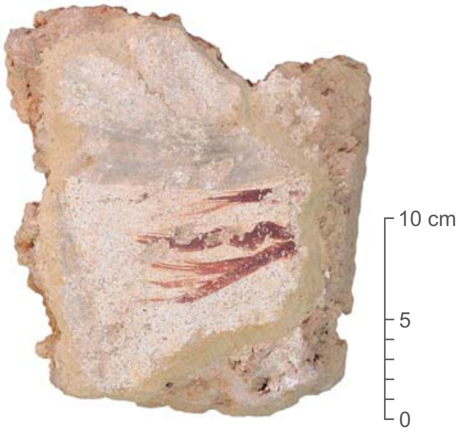


After discovery (1975) *Cat. 123*

Cat. 122 *Inv. No.* 98483 *Fig. 3-28*	*Representation* Bottle-green breast(?) of a bird facing right; fragment of a yellow strip of ground at bottom left; a leaf of a green generic plant right of the bird	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 45 (face) × 17 cm; well-dressed ashlar; porous stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face. Plaster 4–8 mm thick, folded over the right-hand edge, continuing on the side of the ashlar. *Condition*: plaster severely abraded; small patch of intact surface on the left side; granular disintegration of plaster.	
Paint layer	Green paint is semi-opaque, applied with quick strokes of a small brush; curved strokes executed wet-into-wet. *Condition*: abrasions and losses; slightly yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 123 *Inv. No.* –	*Representation* Bird with pink spotted plumage(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –

Cat. 124, 125



After treatment (2018) *Cat. 124*



After treatment (2017) *Cat. 125*

Cat. 124

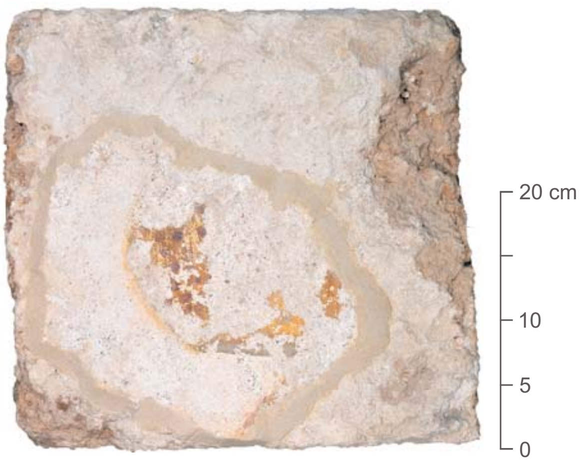
Inv. No. 97130

Representation	Red legs of a gray bird(?) in flight(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	19 × 17 (face) × 8 cm; fragment of an ashlar; porous, crumbly stone. *Condition*: broken on two sides, fresh breaks; back side trimmed.	
Mortar/plaster	Type 2 mortar remains in the cavities of the ashlar. Plaster 7–9 mm thick. *Condition*: poor adhesion, especially along the edges; a few larger cracks; surface pitted and with shallow losses; granular disintegration of plaster.	
Paint layer	Gray element thin and semi-transparent; red element executed with opaque, thick paint. *Condition*: some abrasions; some remains of slightly yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; removal of varnish.	

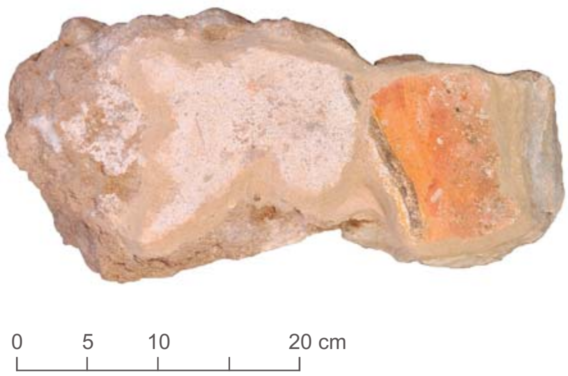
Cat. 125

Inv. No. 98566

Representation	Train of a bird (bluish feather-like elements with orange contours) above a green strip of ground(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	20 × 28 (face) × 9 cm; fragment of an ashlar(?); very porous, inhomogeneous stone. *Condition*: broken on two sides, fresh breaks; back side trimmed.	
Mortar/plaster	Type 2 mortar locally in the cavities of the stone. Plaster 5–12 mm thick; generally directly on stone. *Condition*: shallow losses and abrasions; granular disintegration of plaster.	
Paint layer	Appears relatively thickly applied; visible brushstrokes; orange contours of the feathers applied on top of bluish paint. *Condition*: good overall; minor losses; slightly powdery, especially the green; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 126*



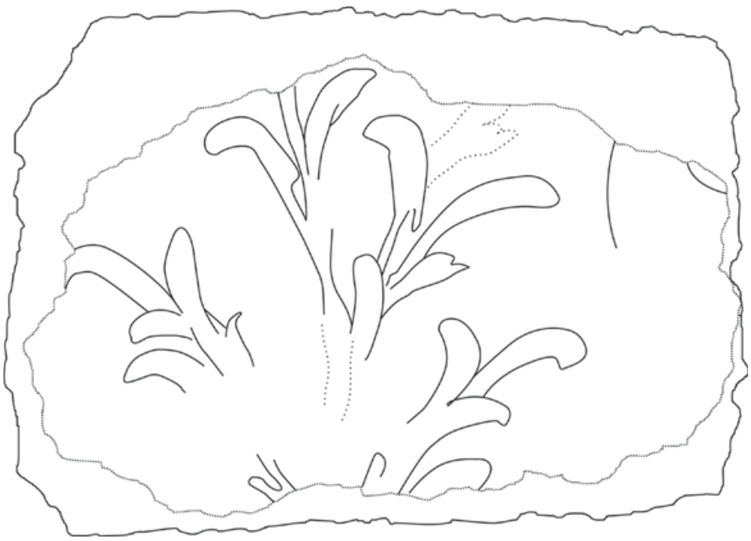
After treatment (2018) *Cat. 127*

Cat. 126 *Inv. No.* 97090 *Sample* Jy004 [*Fig. 3-4*]	*Representation* Round yellow shape with multiple small, reddish-brown spots reminiscent of the pelage of a cheetah	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 38 (face) × 18 cm; nearly square, well-dressed ashlar. *Condition*: good overall; loss along the right edge.	
Mortar/plaster	Type 2 mortar underneath the plaster; Type 1 mortar on the sides of the ashlar. Plaster about 8 mm thick. *Condition*: broad abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; possibly layered structure. *Condition*: poor due to plaster deterioration; extensive abrasions and losses; some remains of slightly yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 127 *Inv. Nos* 98569 98573	*Representation* Spotted pelage of an animal(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	15 × 31 (face) × 15 cm; fragment of an ashlar; porous, crumbly stone. *Condition*: fragmented, two pieces survive; all breaks fresh.	
Mortar/plaster	Type 2 mortar locally in the irregularities of the stone surface. Plaster 5–12 mm thick. *Condition*: losses, abrasions, and cracks; granular disintegration of plaster.	
Paint layer	Buildup consisting of two layers: pink spots and dark contours rendered on top of the base color. *Condition*: relatively good; minor losses; painted area coated with glossy, yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reassembling stone fragments; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 128





After treatment (2017) and tracing; right, lateral view of the ashlar showing cuts made with an angle grinder

Cat. 128 *Inv. No.* 98557	*Representation* Clump of green generic plant; the blue shape to the right might be the breast of a bird (peacock?)	
Fig. 3-34	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	37 × 48 (face) × 12 cm; ashlar; compact stone. *Condition*: two corners rounded; back side trimmed (upper edge of the ashlar only about 3 cm thick).	
Mortar/plaster	Plaster about 8 mm thick, even; directly on stone. *Condition*: weakened adhesion along the edges; some cracking; shallow losses and abrasions; granular disintegration.	
Paint layer	Rendered apparently with one layer of relatively thick paint. *Condition*: faint and abraded; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017)

Cat. 129 *Inv. No.* 97142	*Representation* Green generic plant	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	13 × 25 (face) × 18 cm; wedge-shaped, dressed element. *Condition*: good overall; deep cut made with an angle grinder on the top side, yet the element was not fully trimmed.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the stone. Plaster 5–10 mm thick. *Condition*: minor, shallow losses; granular disintegration of plaster.	
Paint layer	Leaves are rendered with thick green paint applied in one layer. *Condition*: minor losses and abrasions; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.	

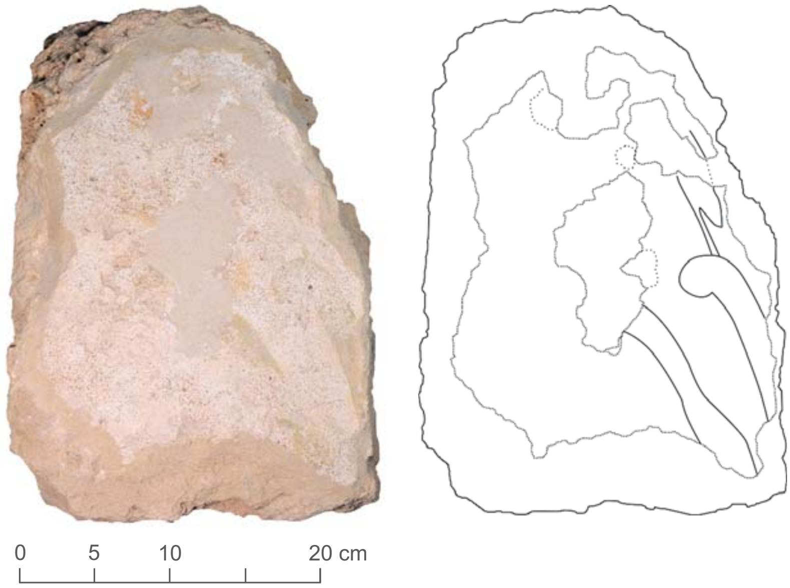




After discovery (2010); right, after treatment (2017)

Cat. 130 *Inv. No.* JY104WP	*Representation* Green generic plant	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	15 × 27 (face) × 15 cm; roughly dressed, small ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 6–8 mm thick. *Condition*: relatively well-preserved at the time of discovery, but almost entirely disintegrated by the time of the transport to Beiteddine; severely abraded; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; most likely applied in one layer. *Condition*: painting practically gone.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting; preventive consolidation of remains of paint layer.	

Cat. 131, 132



After treatment (2017) and tracing *Cat. 131*



After treatment (2017) *Cat. 132*

Cat. 131 *Inv. No.* 98492	*Representation* Green generic plant	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	34 × 24 (face) × 6 cm; fragment of an ashlar. *Condition*: upper right corner missing, fresh break; large loss at the bottom edge; back side trimmed.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face. Plaster about 8 mm thick, even. *Condition*: broad and shallow losses and abrasions; some cracks along the edges; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; most likely applied in one layer. *Condition*: severely abraded and faint; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	

Cat. 132 *Inv. No.* 97137	*Representation* Green leaf	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	20 × 16 (face) × 20 cm; small ashlar. *Condition*: good condition; minor chipping on the edges.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 7–9 mm thick; present on two sides. *Condition*: cracks and surface abrasions; granular disintegration of plaster.	
Paint layer	Green paint applied in one layer. *Condition*: severely abraded and faded; possible remains of yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	





After treatment (2017); bottom, close-up of remains of paint (2014)

Cat. 133 *Inv. No.* 98539	*Representation* Plant stem with small green leaves	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	17 × 26 (face) × 17 cm; small, somewhat unshapely ashlar. *Condition*: rounded corners; slightly crumbly; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the entire face. Plaster 5–10 mm thick. *Condition*: a small patch of the plaster survives; minor losses; granular disintegration of the plaster.	
Paint layer	Green paint applied in one layer. *Condition*: losses and abrasions; faded; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	

Cat. 134, 135



After treatment (2017) *Cat. 134*



After treatment (2017) *Cat. 135*

Cat. 134 *Inv. No.* JY21WP12	*Representation* Large green leaves; yellow and ocher shape above	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	30 × 34 (face) × 14 cm; well-dressed ashlar except for the lower, unshapely side; porous stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar, compensating for surface irregularities of the stone. Plaster 8–9 mm thick. *Condition*: rough and pitted surface; cracks and losses; granular disintegration of plaster.	
Paint layer	Leaves rendered with single strokes; yellow shape outlined with darker contours. *Condition*: abraded and pitted; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	

Cat. 135 *Inv. No.* JY47WP	*Representation* Green leaves growing from a red stem; fragment of a red flower(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	22 × 19 (face) × 28 cm; shapeless porous stone with dressed face. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster; Type 1 mortar on the sides of the stone. Plaster 5–7 mm thick. *Condition*: relatively good save for the granular disintegration of plaster and minor surface losses.	
Paint layer	Applied in one layer, with single brushstrokes. *Condition*: abraded and thin; red elements powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 136





After discovery (2010); bottom, after treatment (2017)

Cat. 136 *Inv. No.* JY53WP	*Representation* Plant with red and pink flower and long, curved leaves	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	34 × 33 (face) × 20 cm; nearly square, well-dressed ashlar. *Condition*: good overall, except for the slightly crumbling left edge.	
Mortar/plaster	Type 2 mortar underneath the plaster on the face and on the right-hand side of the ashlar; Type 1 mortar on other sides of the ashlar. Plaster 5–7 mm thick, present also on the right-hand side of the ashlar; two potsherds observed between the mortar and the plaster. *Condition*: plaster preserved at the time of discovery included the whole flower, albeit cracked and possibly already detached in this place; this part was lost in storage; poor adhesion along the edges; cracks in the surface; granular disintegration of plaster.	
Paint layer	Applied in one thick layer save for the flower where red was painted on top of pink. *Condition*: relatively good; red elements powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

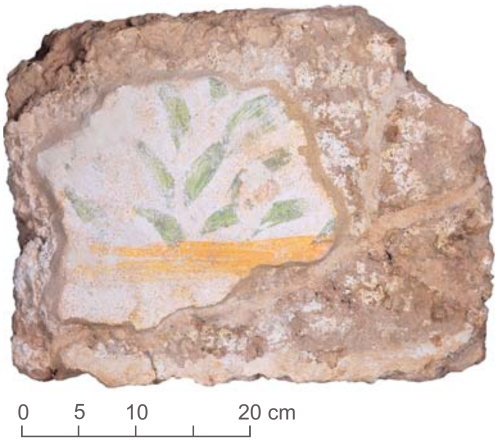
Cat. 137



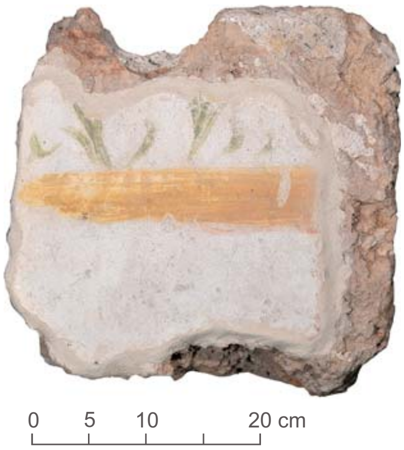


After treatment (2017); above, in storage at Beiteddine Museum (2004)

Cat. 137 *Inv. No.* 98487 ***Figs 4-15, 4-25***	*Representation* Green plants growing from a yellow strip of ground; hind leg(?) of a brown, reclining animal above it	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	38 × 46 (face) × 8 cm; ashlar; very porous stone with pumice-like structure. *Condition*: back side trimmed; otherwise in good condition.	
Mortar/plaster	Type 2 mortar remains in the large cavities in the stone. Plaster 3–10 mm thick. *Condition*: upper part of the extant plaster disintegrated in storage; some of the fragments were collected upon moving the blocks to the current storage room; surface losses; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; layered buildup possible in the area of the presumed animal. *Condition*: numerous abrasions and losses; thick, yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reintegration of broken plaster fragments; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.	



After treatment (2018) *Cat. 138*



After treatment (2017) *Cat. 139*

Cat. 138

Inv. Nos
98572, 98575

Sample
Jy026

Fig. 4-23

Representation
Green plants growing from a yellow strip of ground

Provenance	*Discovery / transport to Beiteddine*
Basilica	1987 / about 1987

Stone	33 × 43 (face) × 8 cm; well-dressed ashlar; porous stone. *Condition*: broken into five fragments, two of which had assigned inventory numbers; a further three were found in the storage room and matched; all breaks fresh; back side trimmed.
Mortar/plaster	Type 2 mortar in strips along the perimeter of the ashlar face. Plaster 6–8 mm thick; directly on stone. *Condition*: surface abrasions; minor losses; granular disintegration of plaster.
Paint layer	Applied with single strokes of paint; ground executed with a wide brush. *Condition*: abraded and faded; small area coated with yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; reassembling of stone fragments; filling in the joints; removal of surface grime; removal of varnish; preventive consolidation of paint layer; infilling losses of plaster; inpainting.

Cat. 139

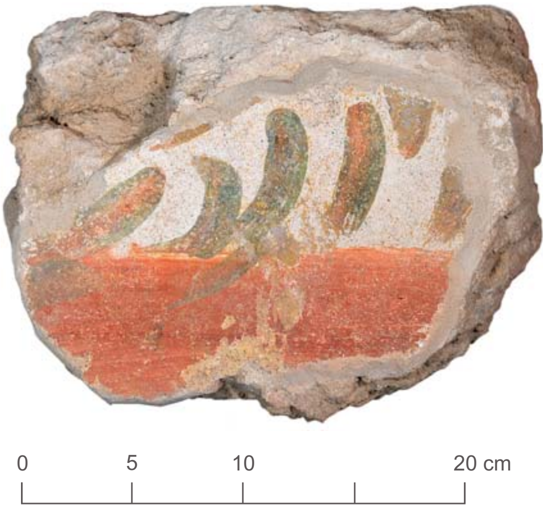
Inv. No.
JY57WP

Representation
Green plants growing from a yellow strip of ground

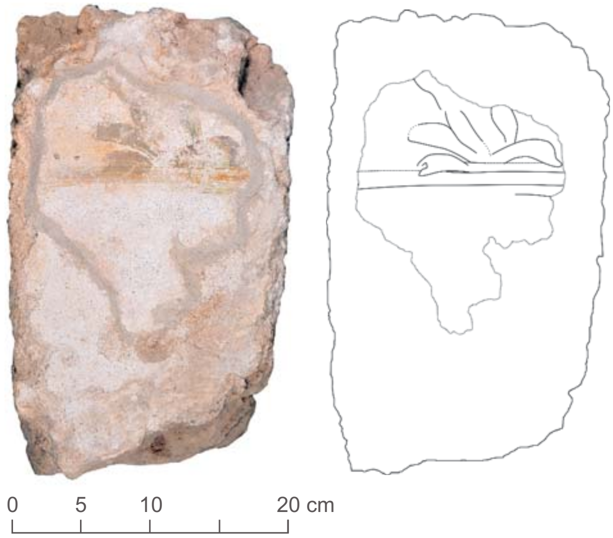
Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 and again in 2000s / 2016

Stone	34 × 34 (face) × 23 cm; roughly dressed ashlar. *Condition*: loss at the bottom edge, filled with mortar, indicating damage prior to use in construction.
Mortar/plaster	Type 1 mortar locally underneath the plaster and on the sides of the ashlar. Plaster about 8 mm thick; generally directly on stone. *Condition*: larger part of plaster preserved at the time of discovery; adhesion slightly weakened along the bottom edge; cracks in the surface; granular disintegration of plaster.
Paint layer	Applied with single strokes of paint; ground executed with broad brushstrokes. *Condition*: relatively good; abrasions and minor losses; remains of glossy, transparent varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.

Cat. 140, 141



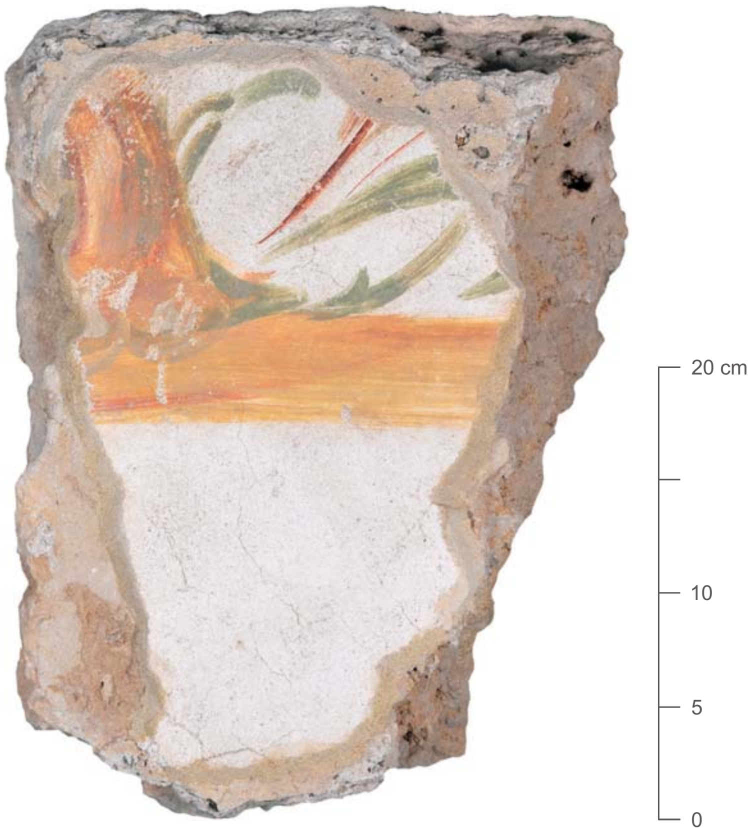
After treatment (2018) *Cat. 140*



After treatment (2017) and tracing *Cat. 141*

Cat. 140 *Inv. No.* 98565	*Representation* Green leaves growing from a red strip of ground (or a trunk if turned sideways)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	19 × 23 (face) × 6 cm; fragment of an ashlar(?). *Condition*: broken on two sides; corners rounded; back side trimmed.	
Mortar/plaster	Type 2 mortar remains along the upper edge of the plaster. Plaster about 5 mm thick, even. *Condition*: a few abrasions; granular disintegration of plaster.	
Paint layer	Red ground rendered with a thick, even layer of opaque paint; green leaves on top; green paint on the leaves apparently mixed with the color of the ground. *Condition*: losses and abrasions; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; infilling losses of plaster; inpainting.	

Cat. 141 *Inv. No.* 98488	*Representation* Clump of vegetation growing from a strip of ground	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	37 × 21 (face) × 40 cm; dressed ashlar, used as a header. *Condition*: some losses to the corners; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the face and on all sides of the ashlar. Plaster about 5 mm thick. *Condition*: generally good; granular disintegration of plaster.	
Paint layer	Applied wet-into-wet; several colors mixed together rather carelessly. *Condition*: abraded and faded; remains of slightly yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer.	



After treatment (2017)

Cat. 142 *Inv. No.* JY55WP	*Representation* Green leaves and possibly a red stem growing from a brown ground or a trunk	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	36 × 28 (face) × 20 cm; roughly dressed ashlar; porous stone. *Condition*: broken on the right side, fresh break; otherwise in good condition.	
Mortar/plaster	Type 1 mortar underneath the plaster and on the sides of the ashlar. Plaster 3–8 mm thick. *Condition*: poor adhesion; cracks in the plaster; granular disintegration of plaster.	
Paint layer	Ocher-brown ground (or a trunk) painted wet-into-wet; colors mixed in a disorderly manner; leaves applied as one layer; paint layer relatively thick; quick brushstrokes. *Condition*: relatively good save for minor losses; thick paint slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

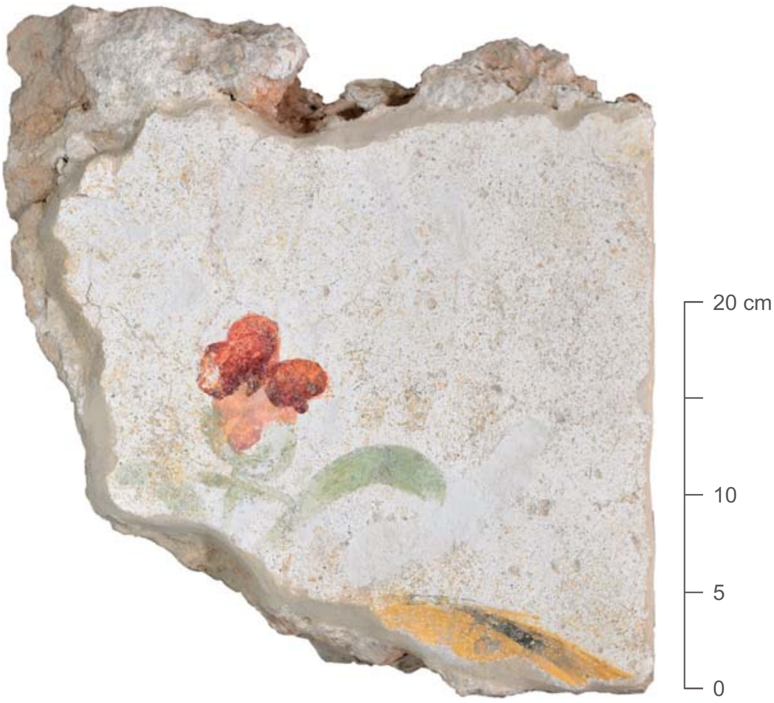
Cat. 143



After treatment (2017)

Cat. 143 *Inv. No.* 97093	*Representation* Plants with green long leaves and pink and red flowers	
Fig. 4-15	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 44 (face) × 12 cm; well-dressed ashlar. *Condition*: upper left corner missing; break covered with mortar, indicating damage prior to construction; back side trimmed; black fungi noted on the back prior to conservation.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face. Plaster 5–10 mm thick; mostly directly on stone. *Condition*: poor adhesion along the edges; pitted rough surface; granular disintegration of plaster.	
Paint layer	Leaves rendered with single strokes; flowers executed wet-into-wet. *Condition*: abrasions and losses; very thick, very yellowed varnish; red parts of paint sensitive after removal of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 144

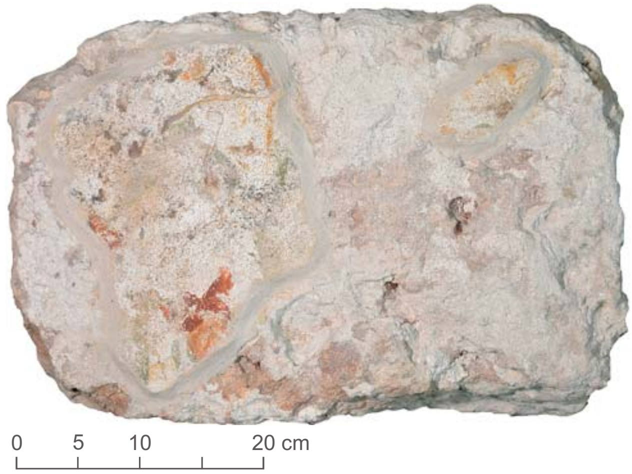




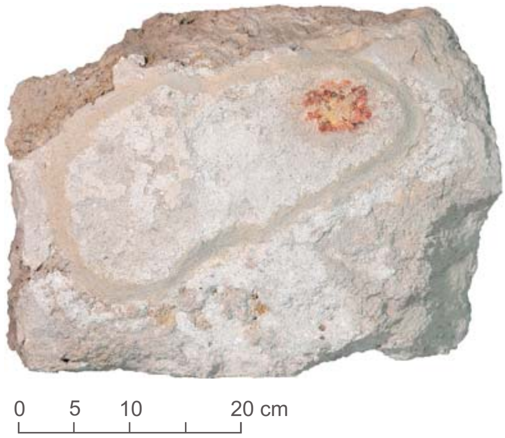
After treatment (2017); bottom, lateral view showing where the stone was cut with an angle grinder

Cat. 144 *Inv. No.* 98544 *Fig. 4-18C*	*Representation* Plant with long green leaves and pink and red flowers; an ocher shape with dark contours and dark spots visible at the bottom edge	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 34 (face) × 8 cm; fragment of an ashlar(?). *Condition*: parts at lower left and upper right missing; upper left corner broken off as well but reattached in the past with epoxy(?) resin; back side trimmed; cut vertically on the right side.	
Mortar/plaster	Type 2 mortar locally at the upper edge. Plaster 5–8 mm thick. *Condition*: poor adhesion along the left edge; large cracks; superficial abrasions, especially on the right side; granular disintegration of plaster.	
Paint layer	Leaves rendered with single strokes; flower executed wet-into-wet. *Condition*: numerous losses and abrasions; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; removal of excess epoxy(?) resin; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of red paint layer; infilling losses of plaster; inpainting.	

Cat. 145, 146



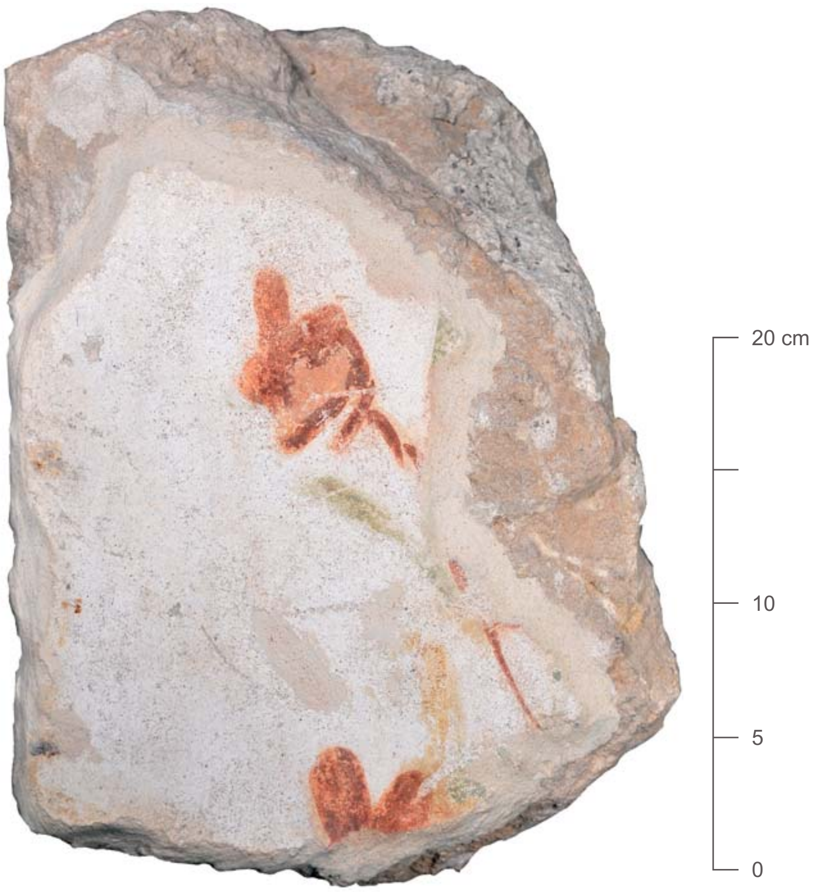
After treatment (2017) *Cat. 145*



After treatment (2017) *Cat. 146*

Cat. 145 *Inv. No.* 98562	*Representation* Plant with red and pink flowers, green leaves and some yellow elements (stems?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 50 (face) × 18 cm; roughly dressed ashlar; compact stone. *Condition*: rounded corners; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the face of the ashlar, compensating for its irregularities. Plaster about 5 mm thick. *Condition*: broad losses and abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poor, resulting from deterioration of the plaster; red elements slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

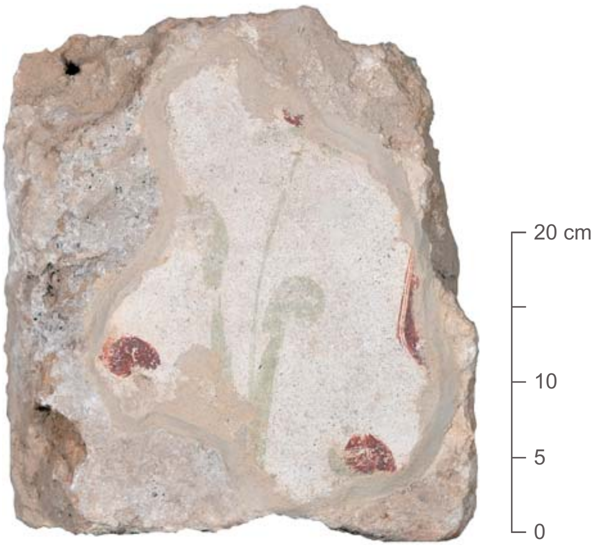
Cat. 146 *Inv. No.* 97086	*Representation* Red flower with yellow center	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	31 × 43 (face) × 15 cm; roughly dressed ashlar. *Condition*: upper left and lower right corners missing; breaks apparently fresh.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face. Plaster 5–8 mm thick; generally directly on stone. *Condition*: surface severely abraded; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poorly preserved; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



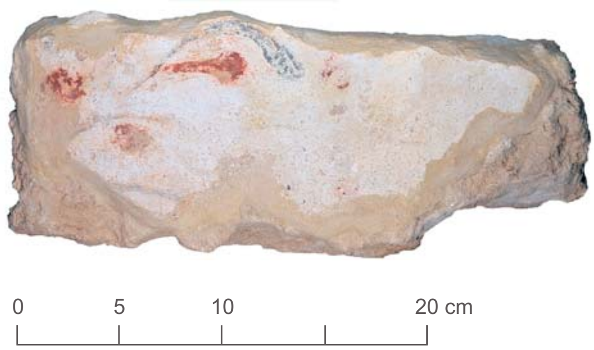
After treatment (2017)

Cat. 147 *Inv. No.* JY65WP	*Representation* Plant with red and pink flowers	
Fig. 4-12	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	33 × 26 (face) × 41 cm; roughly dressed ashlar. *Condition*: one corner missing, covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the face of the ashlar, Type 1 mortar on the sides. Plaster 6–8 mm thick. *Condition*: granular disintegration of plaster.	
Paint layer	Applied generally in one layer; red petals rendered on top of the pink center of the flower. *Condition*: red and pink parts very powdery, visible suffusion of the pigment around the flowers; remains of transparent glossy varnish; dusty.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 148, 149



After treatment (2017) *Cat. 148*



After treatment (2017) *Cat. 149*

Cat. 148 *Inv. No.* 98552	*Representation* Plant with long, green leaves and red flowers	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 30 (face) × 17 cm; well-dressed ashlar. *Condition*: upper right and left corners missing, fresh breaks; back side trimmed.	
Mortar/plaster	Type 2 mortar remains on the face of the ashlar, locally underneath the plaster; Type 1 mortar in one of the cavities of the stone. Plaster 5–8 mm thick. *Condition*: adhesion slightly weakened along the edges; small losses and abrasions; granular disintegration of plaster.	
Paint layer	Applied in one layer; green leaves rendered thinly, red flowers thickly. *Condition*: some abrasions; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 149 *Inv. No.* 97146	*Representation* Plant with red elongated flowers and long, narrow, dark green leaves	
Fig. 4-28	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	18 × 27 (face) × 18 cm; small, roughly dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar. Plaster 5–10 mm thick; directly on stone. *Condition*: minor losses and abrasions; granular disintegration of plaster; otherwise in good condition.	
Paint layer	Probably applied in one layer. *Condition*: severely abraded; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 150



After treatment (2018)

Cat. 150 *Inv. No.* 98546	*Representation* Dense foliage	
Fig. 3-8	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	34 × 40 (face) × 20 cm; well-dressed ashlar. *Condition*: upper right corner missing, covered with mortar, indicating damage prior to use in construction; otherwise in good condition.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face. Plaster 5–7 mm thick; directly on stone; present on two opposite sides of the ashlar, the other side plain. *Condition*: surface abrasion and shallow losses; granular disintegration of plaster.	
Paint layer	Applied wet-into-wet with the use of warm and cool tones of green; “impressionistic”, quick paint handling. *Condition*: broad abrasions; numerous losses; coated with yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.	

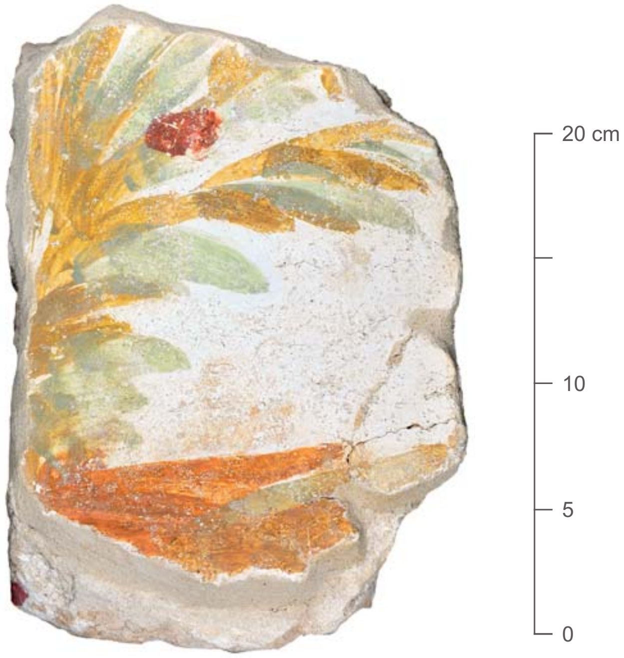
Cat. 151



After treatment (2018)

Cat. 151 *Inv. No.* JY77WP	*Representation* Dense foliage and red flower or fruit; in the upper part, a gray and red element, possibly a bird with red legs; vertical ocher band along the right edge of the composition (pendant to *Cat. 152*)	
Figs 3-7, 4-34, 6-20	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	34 × 19 (face) × 13 cm; small, well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar in a thick layer on the face of the ashlar and the right side where it bears evidence of keying. Plaster 5–15 mm thick; folded over the right-hand edge, continuing on the side of the ashlar. *Condition*: adhesion weakened along the edges; some cracks along the edges; surface abrasion and losses, especially in the upper area; granular disintegration of plaster.	
Paint layer	Foliage rendered with fluid green and ocher paint, applied in superimposed semi-transparent layers. *Condition*: good overall save for minor losses; dusty.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; infilling losses of plaster; inpainting.	

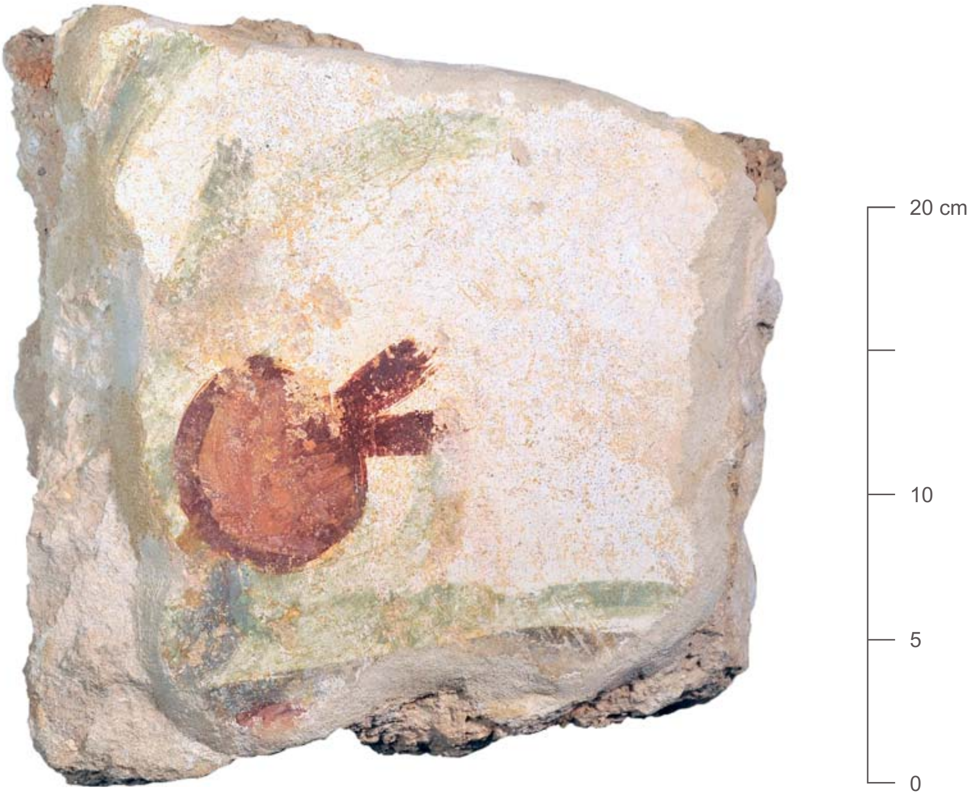
Cat. 152



After treatment (2018)

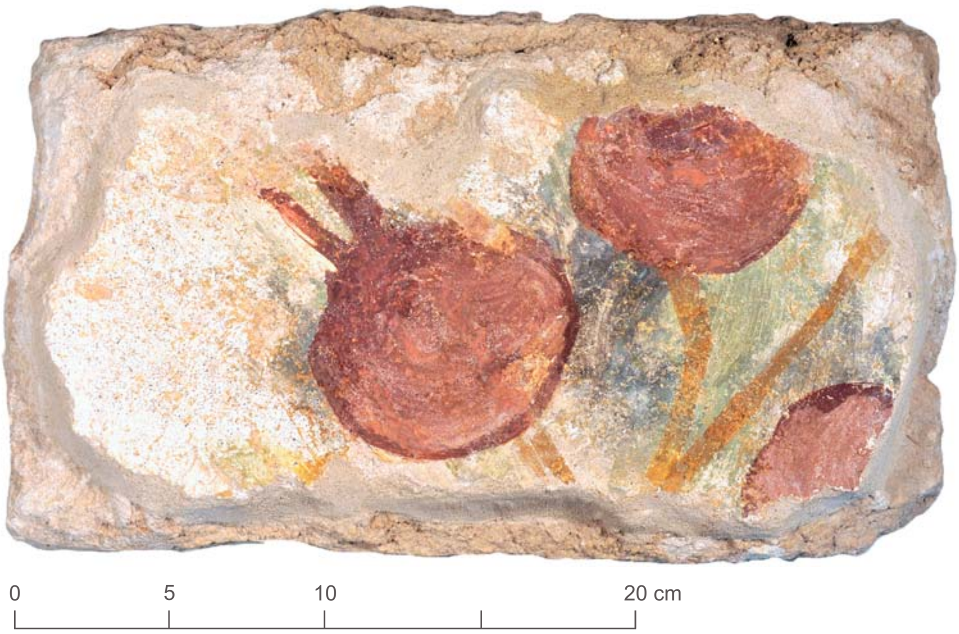
Cat. 152 *Inv. No.* JY106WP	*Representation* Dense foliage and red flower or fruit; in the lower part, ocher-brown ground(?) (pendant to *Cat. 151*)	
Figs 3-8, 3-20, 4-34, 6-20	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	28 × 18 (face) × 13 cm; possibly a regular ashlar once. *Condition*: rounded and missing corners, covered with mortar, indicating damage prior to use in construction; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 3–9 mm thick; folded over the left-hand edge, continuing on the side of the ashlar. *Condition*: adhesion weakened along the edges; a fragment of plaster missing; some cracks along the edges; surface losses, especially in the lower area; granular disintegration of plaster.	
Paint layer	Foliage rendered with fluid green and ocher paint, applied in superimposed semi-transparent layers; ocher-brown ground(?) rendered with thick, opaque paint. *Condition*: good overall save for minor losses and abrasions; dusty.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; integration of broken plaster fragment; application of mortar bands; removal of surface grime; infilling losses of plaster; inpainting.	

Cat. 153



After treatment (2018)

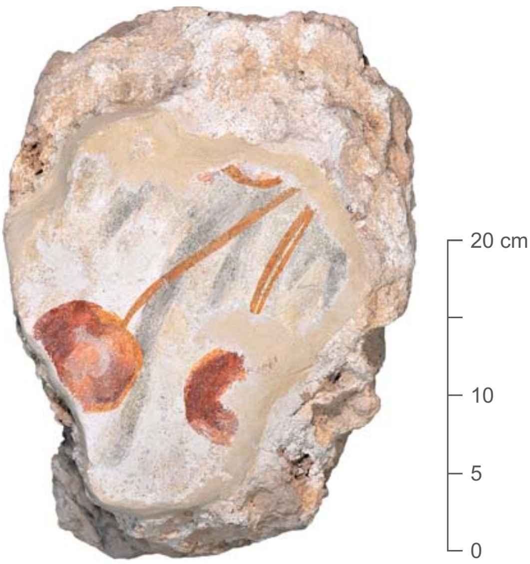
Cat. 153 *Inv. No.* 97110	*Representation* Pomegranate in foliage	
Fig. 3-1	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	25 × 25 (face) × 12 cm; fragment of an ashlar; conglomerate of large bioclasts. *Condition*: top side broken, fresh break; back side trimmed.	
Mortar/plaster	Type 2 mortar locally underneath the plaster. Plaster 6–8 mm thick. *Condition*: adhesion slightly weakened along the edges; surface abrasion and some minor losses; granular disintegration of plaster.	
Paint layer	Leaves rendered in semi-translucent paint, applied in thin superimposed layers; fruit rendered with thick, opaque red color; pink highlights on top. *Condition*: abraded and thin; yellowed varnish; red parts powdery after removal of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	



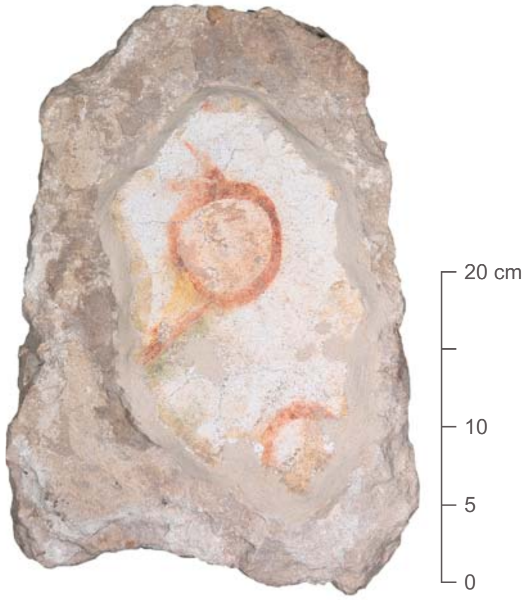
After treatment (2018)

Cat. 154 *Inv. No.* 97140	*Representation* Pomegranates in foliage	
Figs 3-22, 4-18C	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	18 × 31 (face) × 7 cm; small ashlar. *Condition*: back side trimmed, otherwise in good condition.	
Mortar/plaster	Type 2 mortar locally underneath the plaster. Plaster 10–15 mm thick. *Condition*: adhesion slightly weakened along the edges; some scuffs and surface abrasions; granular disintegration of plaster.	
Paint layer	Leaves rendered in semi-translucent paint, applied in thin superimposed layers; fruit rendered with thick, opaque red color; pink highlights and dark contours on top. *Condition*: abraded and thin; yellowed varnish; red parts powdery after removal of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 155, 156



After treatment (2018) *Cat. 155*



After treatment (2018) *Cat. 156*

Cat. 155 *Inv. No.* 97100	*Representation* Pomegranates in foliage	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 26 (face) × 24 cm; shapeless stone, possibly slightly dressed on the face. *Condition*: good.	
Mortar/plaster	Type 2 mortar in the cavities of the stone on its face and sides. Plaster 10–12 mm thick. *Condition*: numerous surface losses, pits, and abrasions; granular disintegration of plaster.	
Paint layer	Leaves rendered in semi-translucent paint, applied in thin superimposed layers; fruit rendered with thick, opaque red color; pink highlights, orange contours and stems on top. *Condition*: numerous losses and abrasions; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 156 *Inv. No.* JY5WP12	*Representation* Schematic representation of pomegranates(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	38 × 28 (face) × 14 cm; shapeless, roughly dressed or damaged ashlar. *Condition*: broken back side, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and in numerous cavities on the sides of the stone. Plaster 8–10 mm thick. *Condition*: numerous cracks in the plaster; minor losses; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; probably originally thinly painted. *Condition*: poorly preserved, thin, barely legible; splashes of glossy, transparent varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	



After discovery (1975)

Cat. 157
Inv. No.
–

Representation
Pomegranates in foliage

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975)

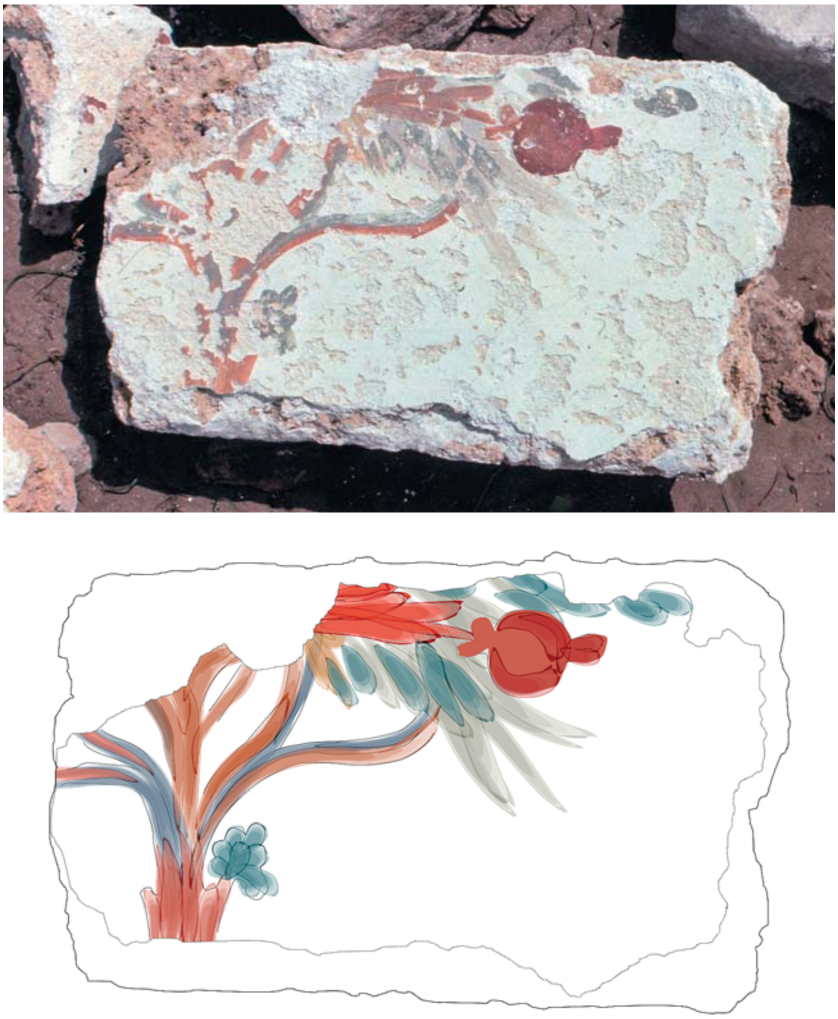
Cat. 158
Inv. No.
–

Representation
Foliage with a pomegranate (visible at the left edge)

Provenance
Residential district

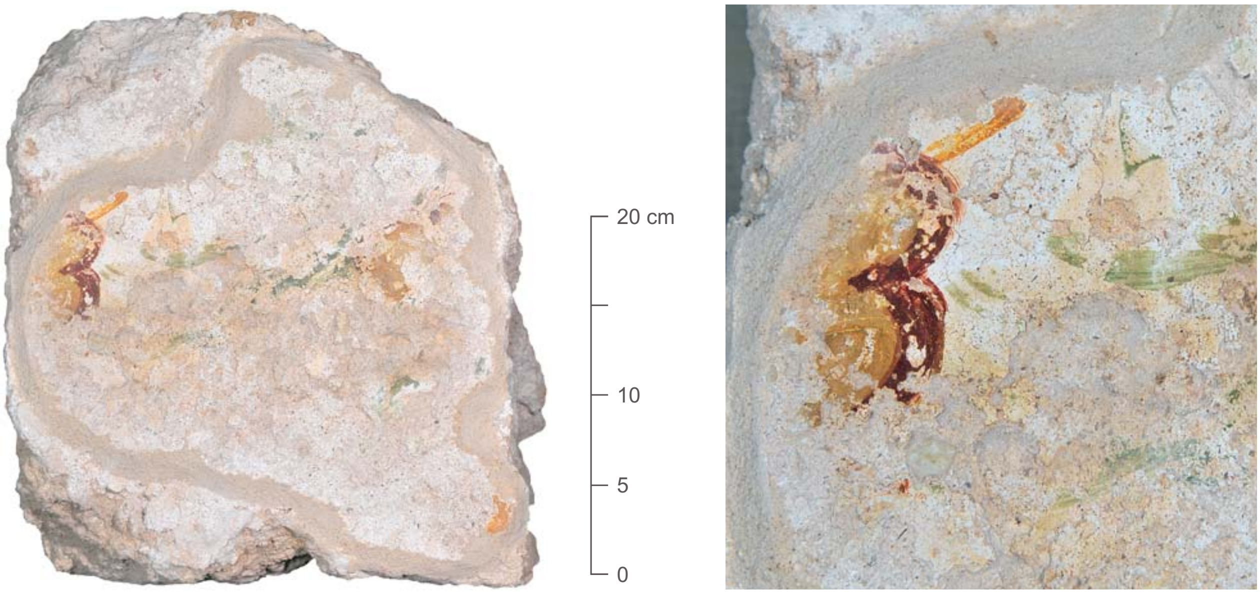
Discovery / transport to Beiteddine
1975 / –

Cat. 159



After discovery (1975) and color tracing

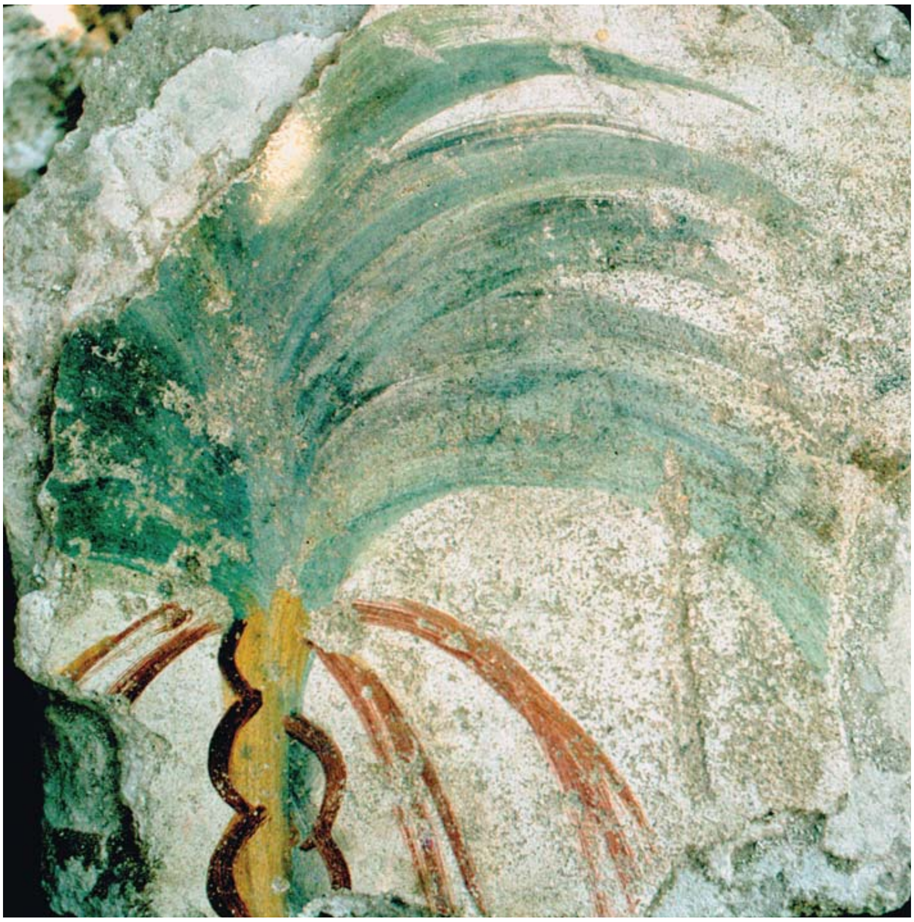
Cat. 159 *Inv. No.* –	*Representation* Foliage with pomegranates and, possibly, curved stylized branches growing from a tree trunk	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –



After treatment (2017); right, close-up of a pear(?)

Cat. 160 *Inv. No.* 97101	*Representation* Two bulbous fruit, most likely pears, in foliage	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 28 (face) × 25 cm; roughly dressed ashlar. *Condition*: bottom right corner missing, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face and on its sides. Plaster 6–8 mm thick. *Condition*: numerous surface losses, pits, and abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting. *Condition*: poor due to plaster deterioration; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime.	

Cat. 161

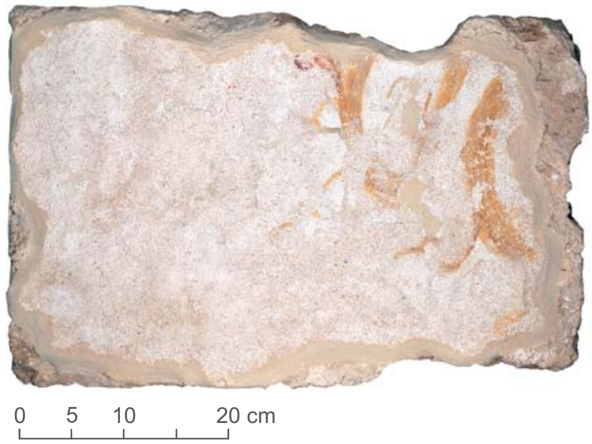


After discovery (1975)

Cat. 161	*Representation* Palm tree	
Inv. No. –	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –



After treatment (2017) *Cat. 162*



After treatment (2017) *Cat. 163*

Cat. 162 *Inv. No.* 98563	*Representation* Vegetal scrolls(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	34 × 54 (face) × 20 cm; well-dressed ashlar; compact stone. *Condition*: good save for minor losses at the corners.	
Mortar/plaster	Type 2 mortar, with some addition of charred organic matter, along the perimeter of the ashlar face. Plaster 5–6 mm thick. *Condition*: numerous surface losses, broad and shallow; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; extant fragments appear to be painted with thick paint, possibly with some chromatic variations made wet-into-wet; besides the ocher color, traces of green paint. *Condition*: abraded; numerous losses and scuffs; very powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

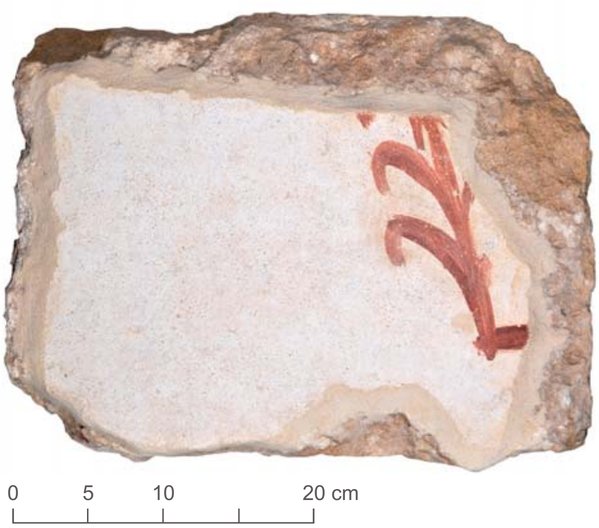
Cat. 163 *Inv. No.* JY69WP	*Representation* Vegetal scrolls(?); fragment of a red flower(?) at the top edge	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	36 × 54 (face) × 19 cm; well-dressed ashlar; indentation in the bottom edge. *Condition*: good.	
Mortar/plaster	Both types of mortar appear on the sides of the ashlar. Plaster probably in two layers of similar composition, each about 5 mm thick. *Condition*: poorly preserved surface; abraded and worn; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess due to the condition of the painting; extant fragments appear to be painted with thick paint, possibly with some chromatic variations made wet-into-wet; besides the ocher color, traces of green and red paint. *Condition*: abraded; numerous losses and scuffs; very powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 164



After treatment (2019)

Cat. 164 *Inv. No.* JY89WP	*Representation* Vegetal scrolls with a bell-shaped flower or fruit	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	35 × 49 (face) × 14 cm; well-dressed ashlar; compact stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar and in some of the cavities on its face. Plaster 7–9 mm thick. *Condition*: adhesion slightly weakened along the top edge; abrasion in the right part of the plaster; minor losses scattered all over; granular disintegration of plaster.	
Paint layer	Layered buildup; ocher tendrils executed first, followed by green foliage and details of the flower or fruit; paint moderately thick, locally semi-transparent. *Condition*: better condition of the painting upon discovery; losses and abrasions seem to have occurred in storage; red and pink parts slightly powdery; streaks of glossy, transparent varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

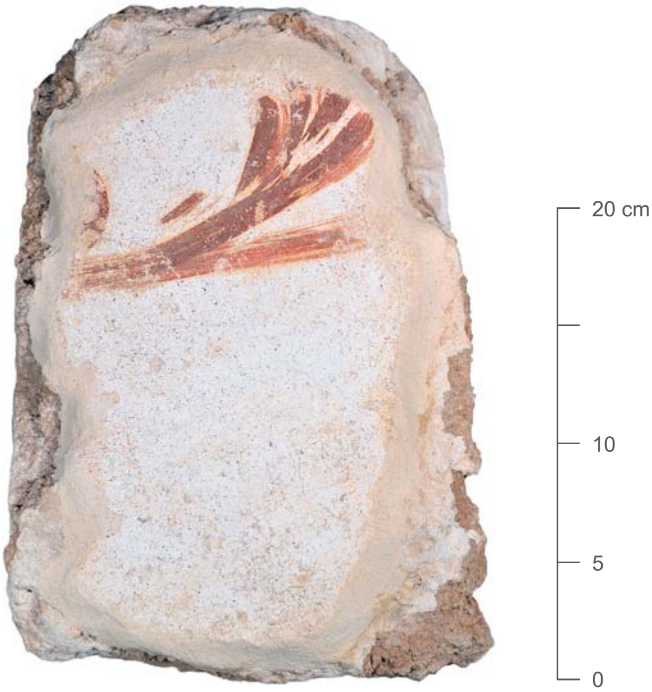




After treatment (2017); right, preserved detail of the ornament, after discovery (2010)

Cat. 165 *Inv. No.* JY61WP	*Representation* Simple vegetal motif	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	31 × 40 (face) × 15 cm; well-dressed ashlar. *Condition*: good save for losses to the corners, some of which appear fresh.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar and locally underneath the plaster. Plaster 6–8 mm thick. *Condition*: good save for granular disintegration of plaster along the edges; at the time of discovery the extant plaster surface was larger along the right edge.	
Paint layer	Thick, monochrome, applied in one layer. *Condition*: good overall, slightly powdery; streaks of glossy, transparent varnish; dusty.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting; removal of varnish; consolidation of powdery paint layer.	

Cat. 166, 167



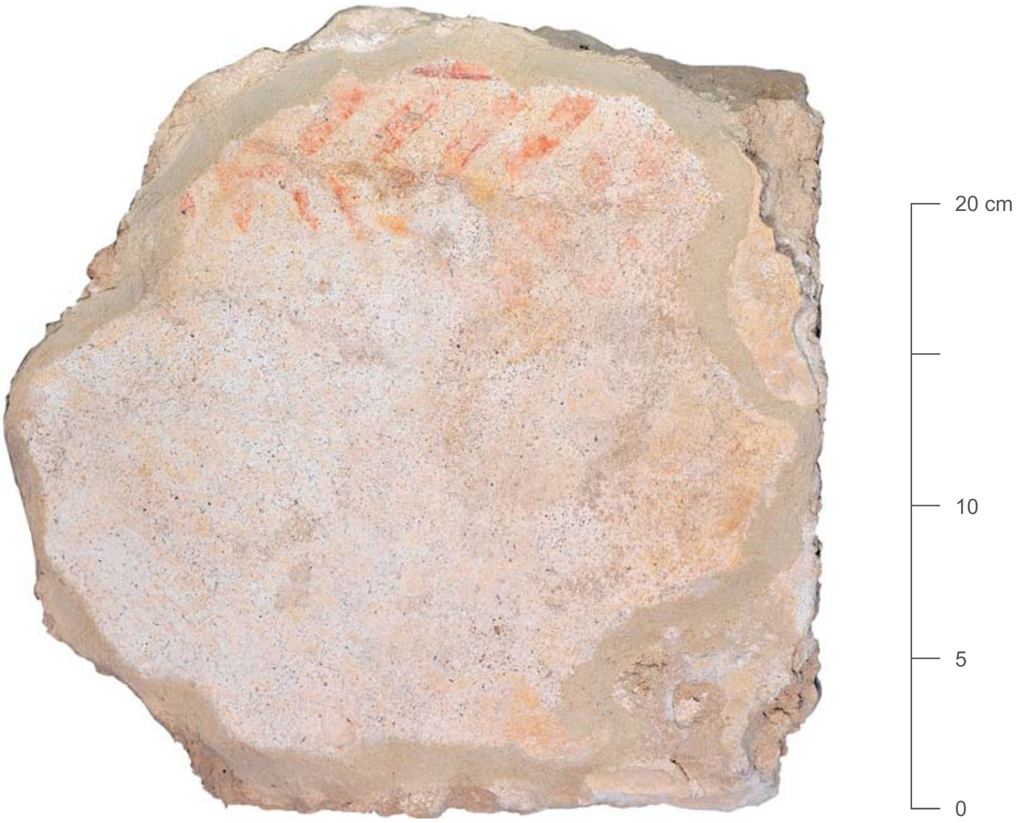
After treatment (2017) *Cat. 166*



After treatment (2017) *Cat. 167*

Cat. 166 *Inv. No.* JY4WP13	*Representation* Fragment of a wreath(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	28 × 20 (face) × 40 cm; roughly dressed ashlar, used as a header. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 8–10 mm thick, even. *Condition*: good save for minor abrasions and granular disintegration of plaster.	
Paint layer	Thick, monochrome, applied in one layer. *Condition*: good overall, slightly powdery; remains of glossy, slightly yellowed varnish; dusty.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting; removal of varnish; consolidation of powdery paint layer.	

Cat. 167 *Inv. No.* JY10WP13	*Representation* Simple vegetal motif	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	16 × 13 (face) × 23 cm; small ashlar. *Condition*: good.	
Mortar/plaster	Type 1 mortar on all sides of the ashlar. Plaster 6–12 mm thick. *Condition*: good save for minor abrasions and granular disintegration of plaster.	
Paint layer	Monochrome; bottom strip of color rendered with thick opaque paint; leaves rendered in a fluent, watercolor-like manner. *Condition*: somewhat abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



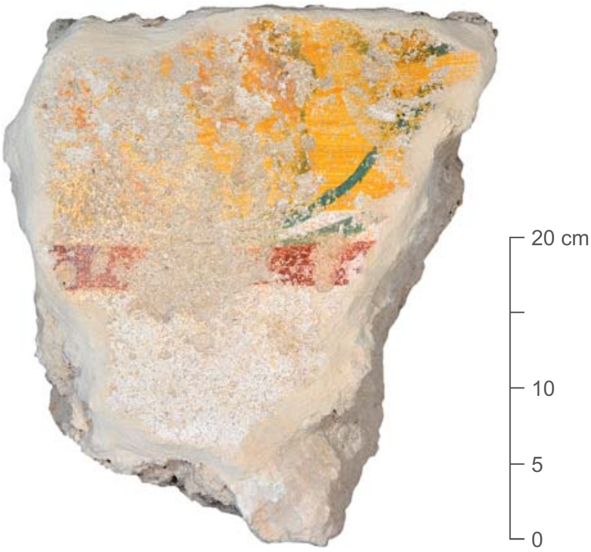
After treatment (2018)

Cat. 168 *Inv. No.* 98538	*Representation* Simple vegetal motif; a stem with leaves(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	27 × 27 (face) × 11 cm; fragment of an ashlar. *Condition*: broken on two sides, both breaks fresh.	
Mortar/plaster	Type 2 mortar locally underneath the plaster and along the perimeter of the ashlar face. Plaster about 6 mm thick. *Condition*: surface abrasions; granular disintegration of plaster.	
Paint layer	Monochrome; applied in one layer. *Condition*: poorly preserved; abraded and faded; slightly powdery; remains of yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 169


a


b



After discovery (1975); bottom, after treatment (2018)

Cat. 169

Inv. No.
a – 98559

Samples
Jy010
Fig. 3-13
Jy011
Fig. 3-9

Representation
Vine scrolls on a yellow background; red band below; ***a*** – white fruit or flower at center top; ***b*** – legs of a bird inside the scroll

Provenance
Residential district

Discovery / transport to Beiteddine
a – 1975 and again in 1987 / about 1987
b – 1975 / –

Stone	Entry concerns only fragment ***a*** 36 × 32 (face) × 20 cm; fragment of an ashlar. *Condition*: right side broken; lower left corner missing, fresh breaks.
Mortar/plaster	Type 2 mortar locally underneath the plaster and on one of the original sides of the ashlar. Plaster 8–12 mm thick; mostly directly on stone. *Condition*: severely abraded and pitted (damage occurred after the discovery); granular disintegration of plaster.
Paint layer	Yellow background pulled with semi-transparent paint using a wide brush; green leaves and red band applied thickly; white dabs of paint on the red band, applied wet-into-wet (because contaminated with red pigment). *Condition*: poor due to plaster deterioration; yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.



After treatment (2017)

Cat. 170 *Inv. Nos* *a* – 97003 *b* – 97115 *Sample* *a* – Jy028 *Fig. 3-21*	*Representation* Inhabited acanthus scrolls on a yellow background; running hound and rooster inside the scrolls; red band framing the composition at the top *Provenance*: Basilica *Discovery / transport to Beiteddine*: 1987 / about 1987
Stone	Well-dressed ashlars: ***a*** – 33 × 22 (face) × 7 cm; ***b*** – 33 × 26 (face) × 9 cm *Condition*: ***a, b*** – back side trimmed, otherwise in good condition. ***a*** – chipping along the edges; white and green fungi noted on the back prior to conservation.
Mortar/plaster	Type 2 mortar along the perimeter of both ashlar faces. Plaster 5–10 mm thick; mostly directly on stone. *Condition*: jagged edges; somewhat weakened adhesion along the edges; some losses and abrasions; granular disintegration of plaster. ***b*** – cracks along the top edge.
Paint layer	Layered buildup consisting of up to four layers of paint: yellow background rendered with semi-transparent, thin paint; followed by the base color of the animals and then their contours and anatomical details; leaves and fruit executed with thick paint containing coarsely ground pigments. *Condition*: relatively good; some losses and abrasions scattered all over; large abrasion in the rooster's head; thick, yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of paint layer; infilling losses of plaster; inpainting.

Cat. 171

a



After treatment (2018)

b



Cat. 171 *Inv. Nos* *a* – 98519 *b* – 98553	*Representation* ***a*** – inhabited scroll on a yellow background; inside the scroll, a small partridge pecking on grapes; pendant to *Cat. 172, 173a, 174a, 175a, 176a* ***b*** – floral grid; pendant to *Cat. 173b, 174b, 175b, 176b*	
Fig. 4-4 *a – Figs 4-34, 6-2* *b – Fig. 5-54*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	***a*** – 34 × 33 (face) × 9 cm; face of a voussoir; it can be matched with fragment ***b***, which constituted its intrados. ***b*** – 40 × 27 (face) × 9 cm; visibly concave intrados surface of a voussoir; it can be matched with fragment ***a***, which constituted its face. *Condition*: ***a***, ***b*** – back side trimmed, cut diagonally along its bottom edge; ***b*** – deep cut at the lower right edge.	
Mortar/plaster	***a*** – Type 2 mortar underneath the top edge of plaster. ***b*** – Type 2 mortar remains along the perimeter of the element's face. ***a, b*** – Plaster 5–6 mm thick; mostly directly on stone. *Condition*: ***a*** – some shallow losses, especially at the bottom edge of the plaster; ***b*** – numerous shallow losses and abrasions; ***a, b*** – granular disintegration of the plaster.	
Paint layer	***a*** – layered buildup comprising up to four layers of paint; particular layers are relatively thin; the thickest paint was used to render the acanthus leaves and fruit; bird rendered with schematic yet skillful strokes. ***b*** – buildup difficult to assess due to the condition of the painting. *Condition*: ***a*** – losses and abrasions scattered all over; yellowed varnish; red elements powdery after removal of varnish; surface grime. ***b*** – poorly preserved; severely abraded and faded; matt yellowed varnish; surface grime.	
Treatment	***a***, ***b*** – disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

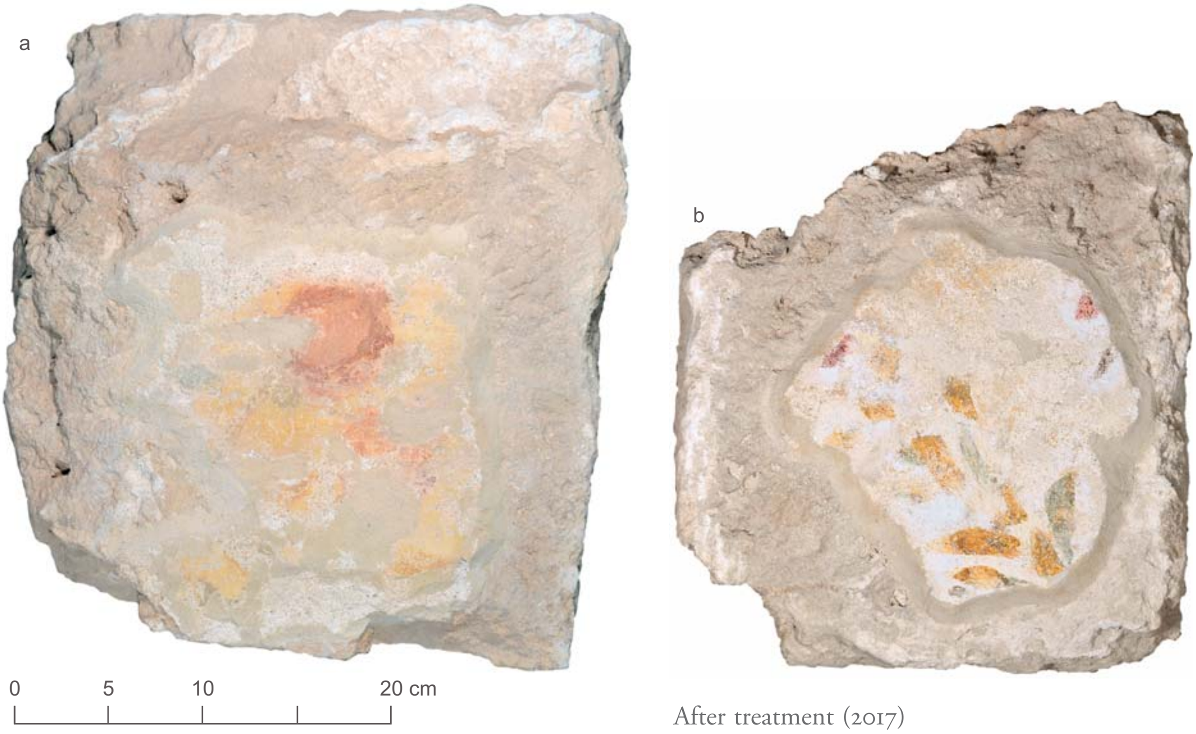




After treatment (2017); bottom, side view and back views of the stone, showing diagonally cut bottom edge

Cat. 172 *Inv. No.* 98514 *Sample* Jy024	*Representation* Inhabited scroll on a yellow background; inside the scroll, two bulbous fruit, likely pears; pendant to *Cat. 171a*, *173a*, *174a*, *175a*, *176a*	
***Figs** 4-4, 4-15, 4-34, 6-2*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 34/26 (top/bottom) × 11 cm; face of a voussoir. *Condition*: back side trimmed; cut diagonally along its bottom edge; bottom left corner missing; remains of epoxy(?) resin.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 10–12 mm thick. *Condition*: numerous shallow losses and abrasions; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Layered buildup comprising up to four layers of paint; particular layers relatively thin; the thickest paint was used to render the acanthus leaves and fruit. *Condition*: losses and severe abrasions; coated with matte, parched, yellowed, delaminating varnish; paint layer delaminates along with the varnish; red elements powdery after removal of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting.	

Cat. 173



After treatment (2017)

Cat. 173

Inv. Nos
a – 98512
b – 97145

Fig. 4-4
a – Fig. 3-1
b – Fig. 5-54

Representation
a – inhabited scroll on a yellow background; inside the scroll, a round red fruit; pendant to *Cat. 171a*, *172*, *174a*, *175a*, *176a*

b – floral grid; pendant to *Cat. 171b*, *174b*, *175b*, *176b*

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone
a – 35 × 29 (face) × 7 cm; face of a voussoir; shallow groove at the top edge; diagonal tool marks along the top edge.
b – 30 × 28 (face) × 8 cm; visibly concave intrados surface of a voussoir. The identical structure and color of the stone material indicates that both pieces belong to the same voussoir.
Condition: ***a, b*** – back side trimmed; ***a*** – cut diagonally along its bottom edge.
b – bottom left corner missing; top edge broken, fresh break.

Mortar/plaster
a – Type 2 mortar in the groove at the top edge. Plaster about 8 mm; directly on stone.
b – Type 2 mortar remains along the perimeter of the element's face. Plaster 6–12 mm thick; directly on stone.
Condition: ***a*** – poorly preserved; shallow surface losses; jagged plaster edges; granular disintegration of plaster.
b – surface abrasion and small losses; cracks; granular disintegration of plaster; remains of epoxy(?) resin probably for reattaching plaster to the stone support.

Paint layer
a, b – buildup difficult to assess due to the condition of the painting. ***b*** – leaves apparently rendered with warm and cool tones of green.
Condition: ***a*** – poorly preserved; abraded and faded; red fruit powdery; surface grime.
b – abraded and faded; yellowed varnish; surface grime.

Treatment
a, ***b*** – disinfection; ***a*** – consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer. ***b*** – consolidation of plaster edges; removal of epoxy(?) resin; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of red paint layer; infilling losses of plaster; inpainting.

a



b



After treatment (2018)

Cat. 174

Inv. Nos
a – 97113
b – 98522

Sample
a – Jy039
[*Fig. 4-17B*]

Figs 4-3, 4-4
a – *Fig. 6-2*
b – *Fig. 5-54*

Representation
a – inhabited scroll on a yellow background; inside the scroll, two heart-shaped fruit; pendant to *Cat. 171a*, *172*, *173a*, *175a*, *176a*

b – floral grid; pendant to *Cat. 171b*, *173b*, *175b*, *176b*

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	***a*** – 35 × 25 (face) × 12 cm; face of a voussoir. ***b*** – 42 × 22 (face) × 7 cm; visibly concave intrados surface of the same voussoir. *Condition*: ***a, b*** – back side trimmed; ***a*** – cut diagonally along its bottom edge; upper right corner missing, fresh break (a fragment of this corner was found in the storage room). ***b*** – cut diagonally along its bottom edge; lower right corner missing, fresh break.
Mortar/plaster	***a*** – Type 2 mortar along the perimeter of the element's face. Plaster 7–10 mm thick. ***b*** – Type 2 mortar in a strip along the perimeter of the element's face. Plaster 5–10 mm thick; directly on stone. *Condition*: ***a*** – severely abraded, especially in the upper right part; jagged edges and granular disintegration of plaster. ***b*** – jagged plaster edges; abraded and pitted surface; granular disintegration of plaster.
Paint layer	***a*** – layered buildup, comprising up to four layers of paint; the thickest paint renders acanthus leaves and fruit. ***b*** – buildup difficult to assess due to the condition of the painting; leaves rendered apparently with warm and cool tones of green. *Condition*: ***a*** – severe and broad abrasions of the paint, especially on the leaves; yellowed varnish locally turned opaque; red elements powdery after removal of varnish; surface grime. ***b*** – losses and abrasions; surface grime.
Treatment	***a***, ***b*** – disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; ***a*** – integration of broken stone fragment; removal of surface grime; removal of varnish; consolidation of powdery paint layer; infilling losses of plaster; inpainting. ***b*** – removal of surface grime; infilling losses of plaster; inpainting.

Cat. 175

a



After treatment (2018)

b



Cat. 175

Inv. Nos
a – 97009
b – 97011

Fig. 4-4
a – Fig. 6-2
b – Figs 4-18C, 5-54

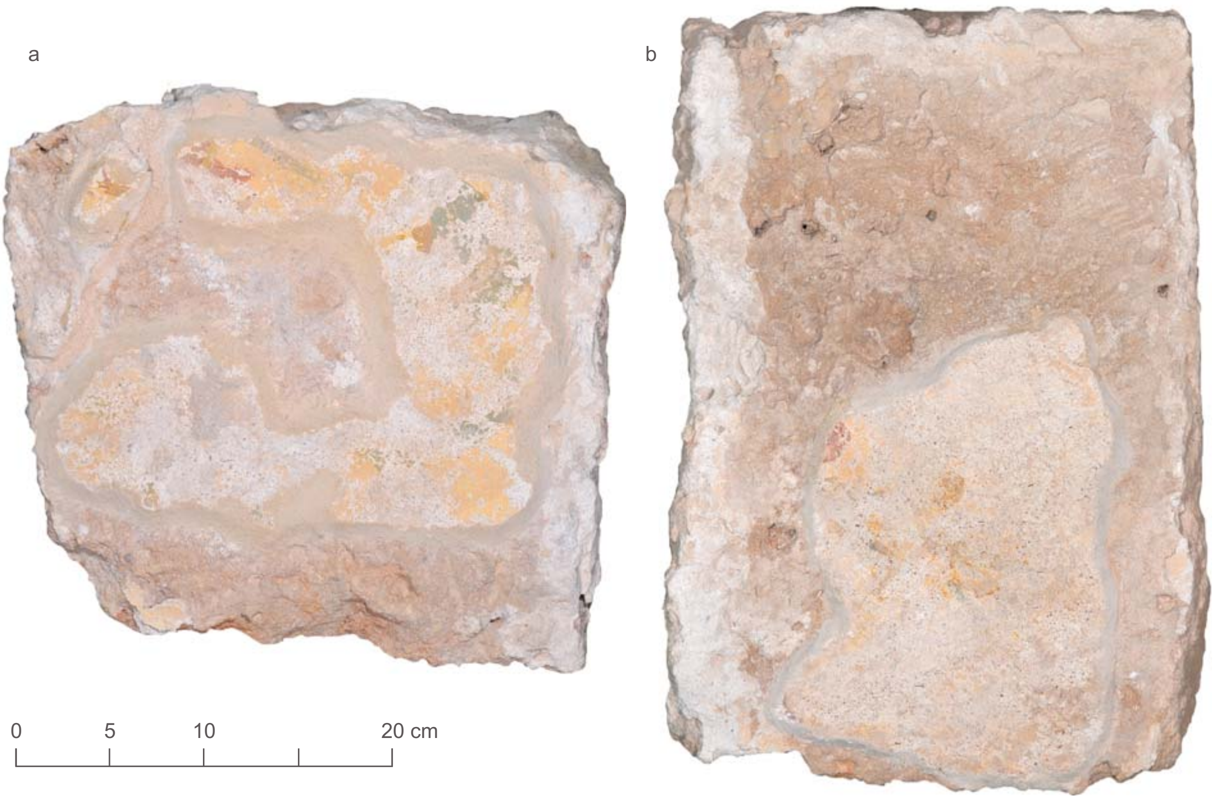
Representation
a – inhabited scroll on a yellow background; inside the scroll, a round red fruit; pendant to *Cat. 171a, 172, 173a, 174a, 176a*

b – floral grid; pendant to *Cat. 171b, 173b, 174b, 176b*

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	***a*** – 34 × 27 (face) × 9 cm; face of a voussoir. ***b*** – 40 × 20 (face) × 8 cm; visibly concave intrados surface of the same voussoir. *Condition*: ***a, b*** – back side trimmed; ***a*** – cut diagonally along its bottom edge; missing lower left corner found in storage, fresh break; large crack visible on the back. ***b*** – cut diagonally along its bottom edge.
Mortar/plaster	***a*** – Type 2 mortar along the perimeter of the element's face. Plaster 6–8 mm thick; 3 mm thick along the bottom edge. ***b*** – Type 2 mortar remains along the perimeter of the element's face. Plaster 3–7 mm thick. *Condition*: ***a*** – relatively good; minor losses; granular disintegration of plaster. ***b*** – jagged plaster edges; small losses and abrasions; granular disintegration of plaster.
Paint layer	***a*** – layered buildup, comprising up to four layers of paint; background rendered with relatively thin paint; the thickest paint rendering acanthus leaves and fruit. ***b*** – leaves seem to have been applied with single strokes of brush; red flower petals painted on top of the pink center. *Condition*: ***a*** – minor losses and abrasions; yellowed varnish; surface grime. ***b*** – losses and abrasions; matte, yellowed varnish; surface grime.
Treatment	***a, b*** – disinfection; consolidation of plaster edges; application of mortar bands; reintegration of small stone fragment (*a*); removal of surface grime; removal of varnish; preventive consolidation of paint layer (*b*); infilling losses of plaster; inpainting.



After treatment (2017)

Cat. 176

Inv. Nos
a – 97106, 97134
b – 97118

Fig. 4-4
b – Figs 3-6, 5-54

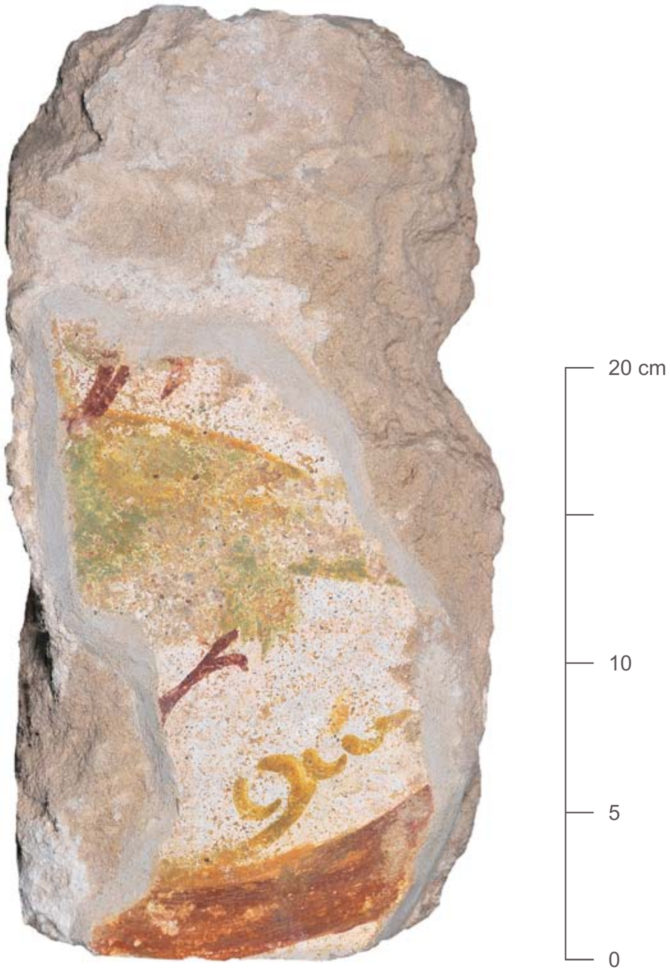
Representation
a – inhabited scroll on a yellow background; contents of the scroll indeterminable; pendant to *Cat. 171a, 172, 173a, 174a, 175a*

b – floral grid; pendant to *Cat. 171b, 173b, 174b, 175b*

Provenance	*Discovery / transport to Beiteddine*
Basilica	1987 / about 1987

Stone	***a*** – 30 × 34 (face) × 6 cm; face of a voussoir. ***b*** – 40 × 27 (face) × 7 cm; visibly concave intrados surface of the same voussoir; diagonal tool marks visible where the plaster is missing. *Condition*: ***a, b*** – back side trimmed; ***a*** – cut diagonally along its bottom edge; upper left corner broken (registered under a separate inventory number); both elements bear remains of epoxy(?) resin on the break; chipping along the edges. ***b*** – cut diagonally along its bottom edge.
Mortar/plaster	***a*** – Type 2 mortar remains in the cavities of the stone. Plaster 5–8 mm thick. ***b*** – Type 2 mortar in a strip on the perimeter of the ashlar face. Plaster 4–9 mm thick. *Condition*: ***a*** – severely abraded; broad and shallow losses; granular disintegration of plaster; remains of epoxy(?) resin most likely for reattaching plaster to the stone support. ***b*** – severely abraded; shallow losses; granular disintegration of plaster; remains of epoxy(?) resin near the upper left corner, most likely for reattaching plaster to the stone support.
Paint layer	***a, b*** – buildup difficult to assess due to the condition of the painting. *Condition*: ***a*** – poorly preserved; abraded and faded; slightly powdery; surface grime. ***b*** – severely abraded and almost illegible; surface grime.
Treatment	***a, b*** – disinfection; consolidation of plaster edges and abraded areas; removal of epoxy(?) resin; application of mortar bands; integration of broken stone corner (***a***); removal of surface grime; preventive consolidation of powdery paint layer.

Cat. 177



After treatment (2017)

Cat. 177 *Inv. No.* 97144	*Representation* Inhabited scroll on a white background; inside the scroll, a green bird (parakeet?)	
Figs 3-11, 4-31	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 17 (face) × 8 cm; face of a voussoir. *Condition*: back side trimmed; cut diagonally along its bottom edge; fresh-looking chipping on the front.	
Mortar/plaster	Type 2 mortar locally in the cavities of the stone. Plaster 7–8 mm thick. *Condition*: rough and abraded surface; granular disintegration of plaster.	
Paint layer	Varying thickness and paint handling; dark red stem of the scroll painted with thick, opaque paint; tendril rendered with a few strokes of watery paint; bird executed in two to three superimposed layers. *Condition*: abraded, especially in the part with the bird; yellowed varnish; red parts powdery after removal of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	



After treatment (2018)



Angled view, showing the concavity in the intrados surface and the large loss on the back of the stone

Cat. 178 *Inv. No.* 97087	*Representation* Red inhabited scroll on a white background; large fruit(?) in the center	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	40 × 16 (face) × 31 cm; well-dressed voussoir. *Condition*: one corner missing, apparently fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the voussoir. Plaster present on the face and intrados surface; 5–7 mm thick. *Condition*: weakened adhesion along the edges; surface condition relatively good; granular disintegration of plaster.	
Paint layer	Painting on the intrados side; paint layer buildup difficult to assess due to the condition of the painting; possibly executed only with red and pink colors; the presumed fruit rendered with thick paint. *Condition*: losses and abrasions; yellowed varnish; surface grime; hard, mortar-like incrustation on the face.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 179, 180



After discovery (1975)

Cat. 179
Inv. No.
–

Representation
Human figure

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975)

Cat. 180
Inv. No.
–

Representation
Seated human figure

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975)

Cat. 181
Inv. No.
–

Representation
Striding animal (ox?)

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975)

Cat. 182
Inv. No.
–

Representation
Running hound(?); possibly from a hunting scene

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –

Cat. 183, 184



After discovery (1975)

Cat. 183

Inv. No.
–

Representation
Slender animal with a long tail rushing among plants; human foot(?) in the bottom right corner; possibly from a hunting scene

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975)

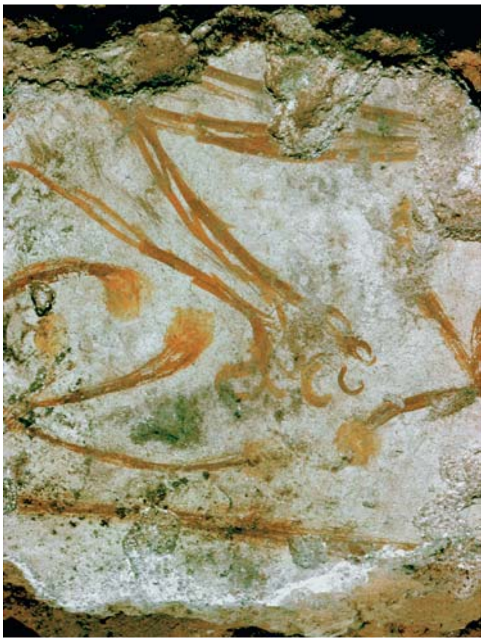
Cat. 184

Inv. No.
–

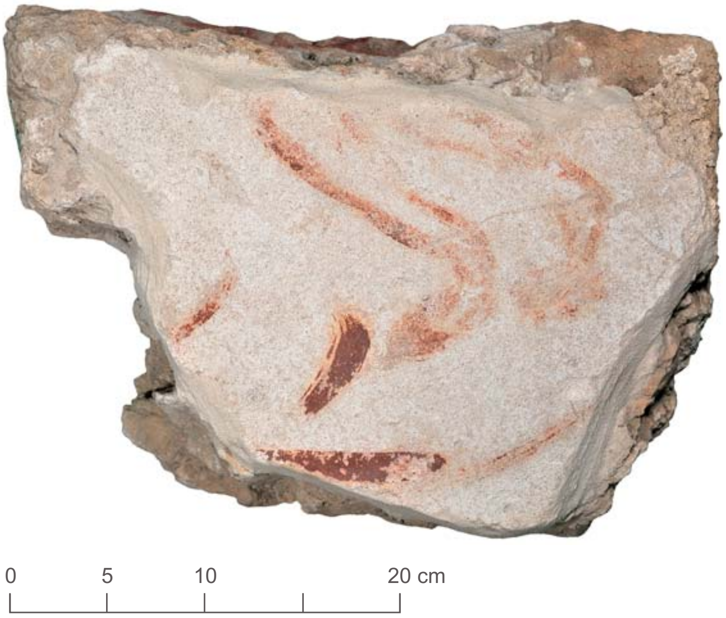
Representation
Animal looking behind and with its forelegs stretched before it; possibly from a hunting scene

Provenance
Residential district

Discovery / transport to Beiteddine
1975 / –



After discovery (1975) *Cat. 185*

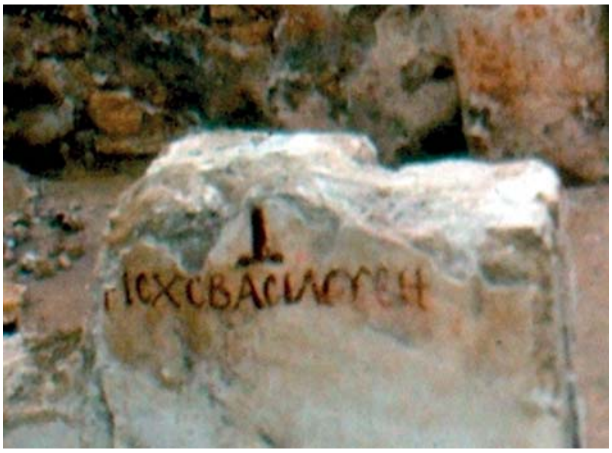


After treatment (2017) *Cat. 186*

Cat. 185 *Inv. No.* –	*Representation* Hind legs and tail of a running animal; possibly from a hunting scene	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 / –

Cat. 186 *Inv. No.* JY8WP13	*Representation* Hind legs of a running animal(?); possibly from a hunting scene	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	25 × 37 (face) × 28 cm; an ashlar and a shapeless stone (in the upper left corner) held together by mortar. *Condition*: good.	
Mortar/plaster	Type 1 mortar on the sides of the element and binding the two stones together. Plaster 8–11 mm thick. *Condition*: surface abrasions and losses; some cracks; granular disintegration of plaster.	
Paint layer	Red paint applied in one, possibly relatively thick layer. *Condition*: most of the paint severely abraded and hardly legible; powdery and sensitive; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 187, 188







After discovery (1975) and tracing *Cat. 187*



After discovery (1975) and tracing *Cat. 188*

Cat. 187
Cat. 188

Inv. No.
Cat. 188 – JY7WP12

Sample
Jy038
[*Fig. 4-17A*]

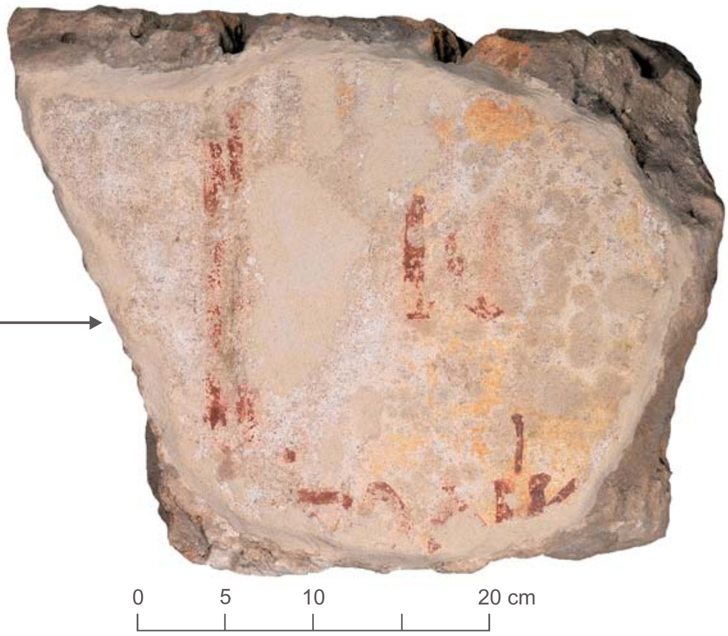
Chapter 5: 212–213

Representation
Cat. 187 – Greek inscription below a simple red cross
Cat. 188 – Greek inscription below a simple red cross with *alpha* and *omega*
Letter height unknown

Provenance	*Discovery / transport to Beiteddine*
Residential district; Complex 8, courtyard D11, on either side of the passage to room D12	*187* – 1975 / – *188* – 1975 and again in the 2000s / 2016

Stone	Entry concerns *Cat. 188* 31 × 40 (face) × 18 cm; fragment of a roughly dressed ashlar; very porous stone. *Condition*: left side broken, fresh break.
Mortar/plaster	Type 2 mortar on the sides of the ashlar. Plaster 7–10 mm thick. *Condition*: broad and shallow losses; abrasions and scuffs; granular disintegration of plaster.
Paint layer	Red paint applied in one layer. *Condition*: poorly preserved; abraded and faint; yellowed varnish; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime.
References	Rey-Coquais 1982: Nos 3–4





After discovery (1975); right, after treatment (2017) *Cat. 188*



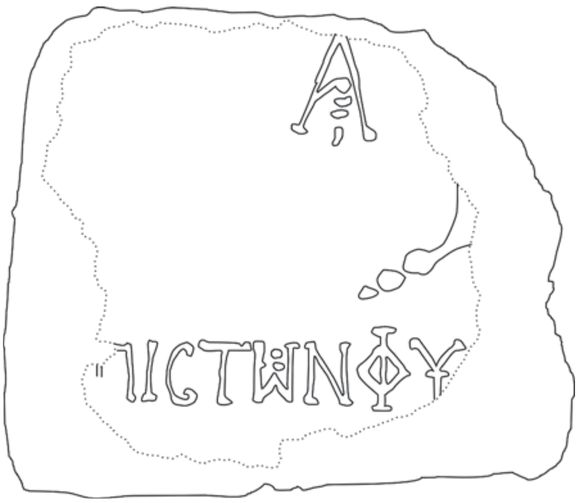
Passage from courtyard D11 into room D12: *Cat. 187* to the left of the doorway, *Cat. 188* to the right. General view after exploration in 1975

Cat. 189, 190



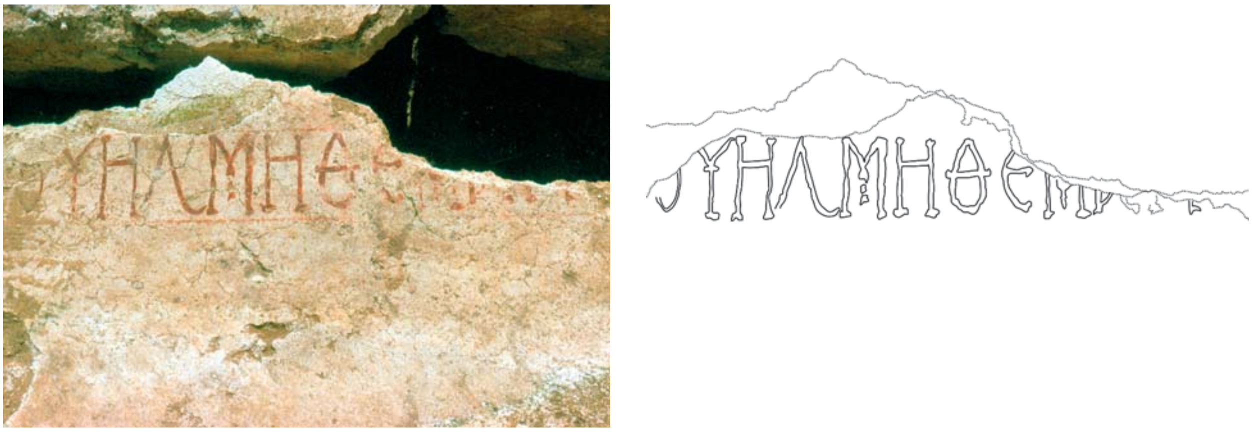

After discovery (1975) and tracing

Cat. 189 *Inv. No.* –	*Representation* Greek inscription below a simple red cross with *alpha* and *omega*; red line below Letter height unknown	
Chapter 5: 213–214	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –
References	Rey-Coquais 1982: No. 5	



Tracing after Rey-Coquais 1982

Cat. 190 *Inv. No.* –	*Representation* Greek inscription below a simple red cross with *alpha* and *omega* Letter height unknown	
Chapter 5: 214–215	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –
References	Rey-Coquais 1982: No. 6	



After discovery (1975) and tracing

Cat. 191

Inv. No.
–

Chapter 5: 215
Fig. 3-17

Representation
Greek inscription. Tall and slender characters (similar to *Cat. 192*)
Letter height unknown

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –



After discovery (1975) and tracing

Cat. 192

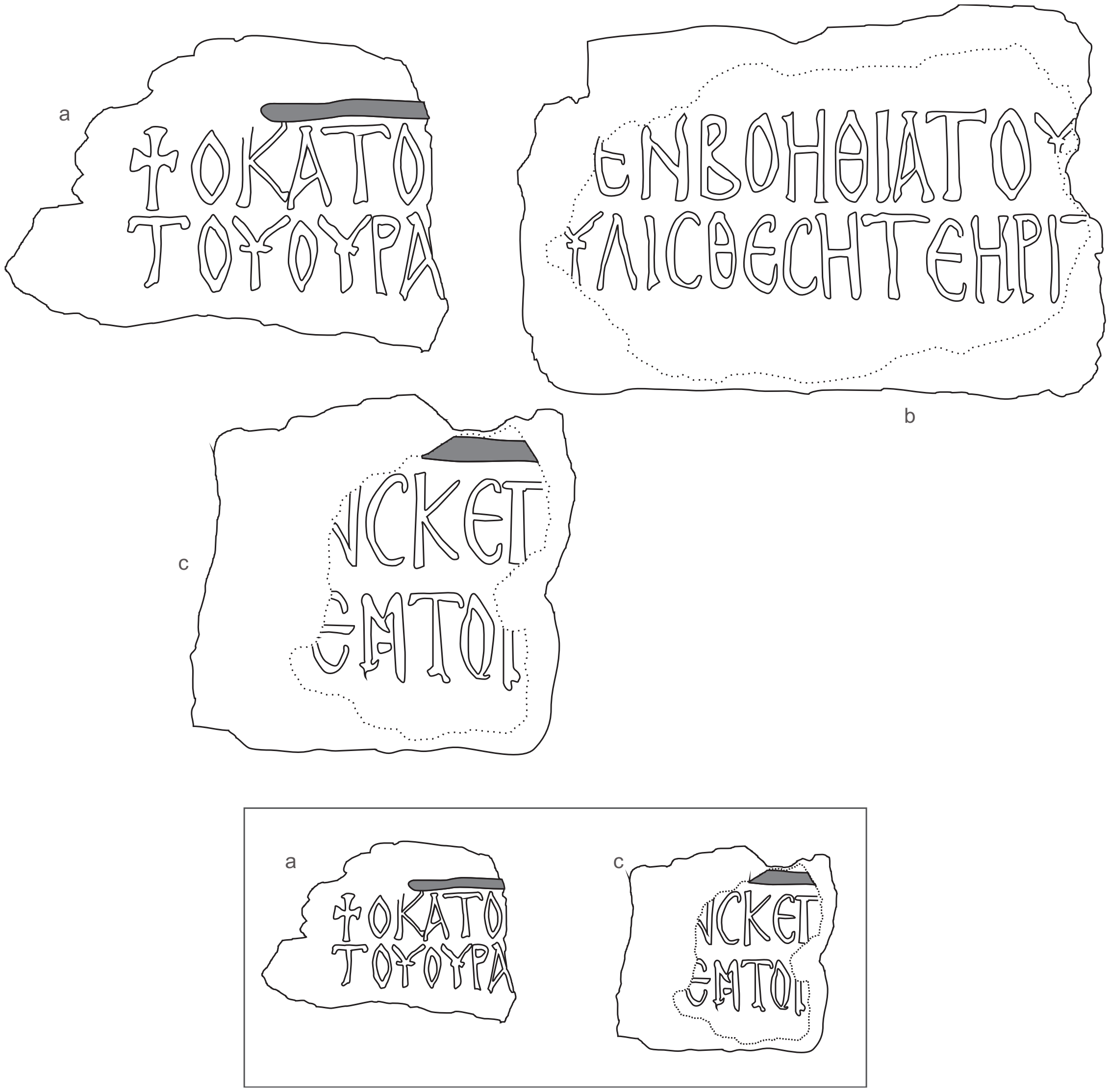
Inv. No.
–

Chapter 5: 215

Representation
Greek inscription below a simple red cross with decorative knobs and curls; red leaf at the end of the second line. Tall and slender characters (similar to *Cat. 191*)
Letter height unknown

Provenance	*Discovery / transport to Beiteddine*
Residential district	1975 / –

Cat. 193



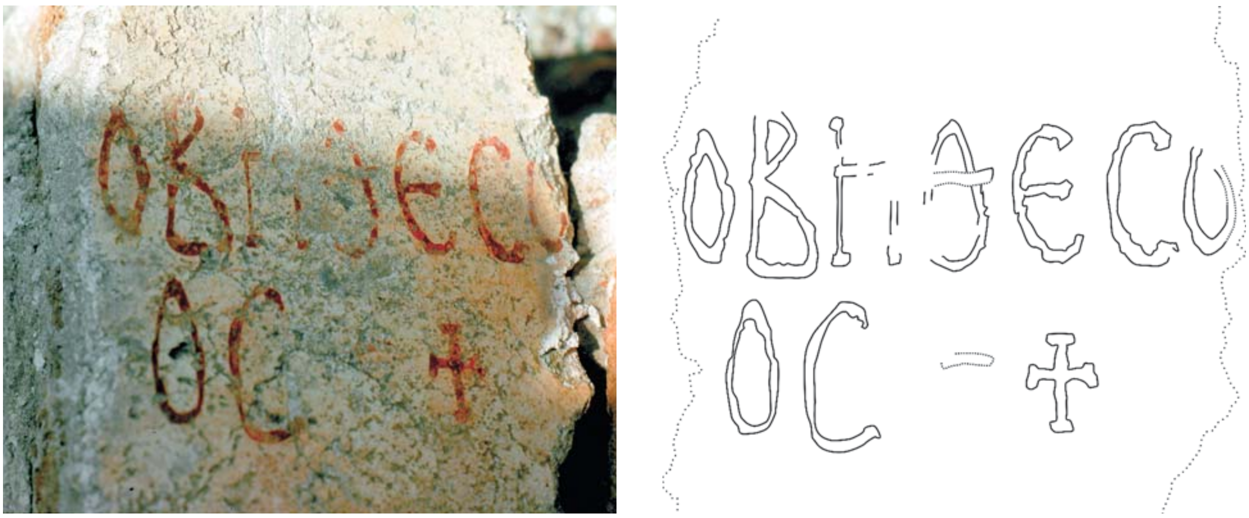
Tracing after Rey-Coquais 1982

Cat. 193 *Inv. No.* –	*Representation* Greek inscription across three ashlars Letter height unknown	
Chapter 5: 216	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –
References	Rey-Coquais 1982: No. 7	



After treatment (2017) and tracing

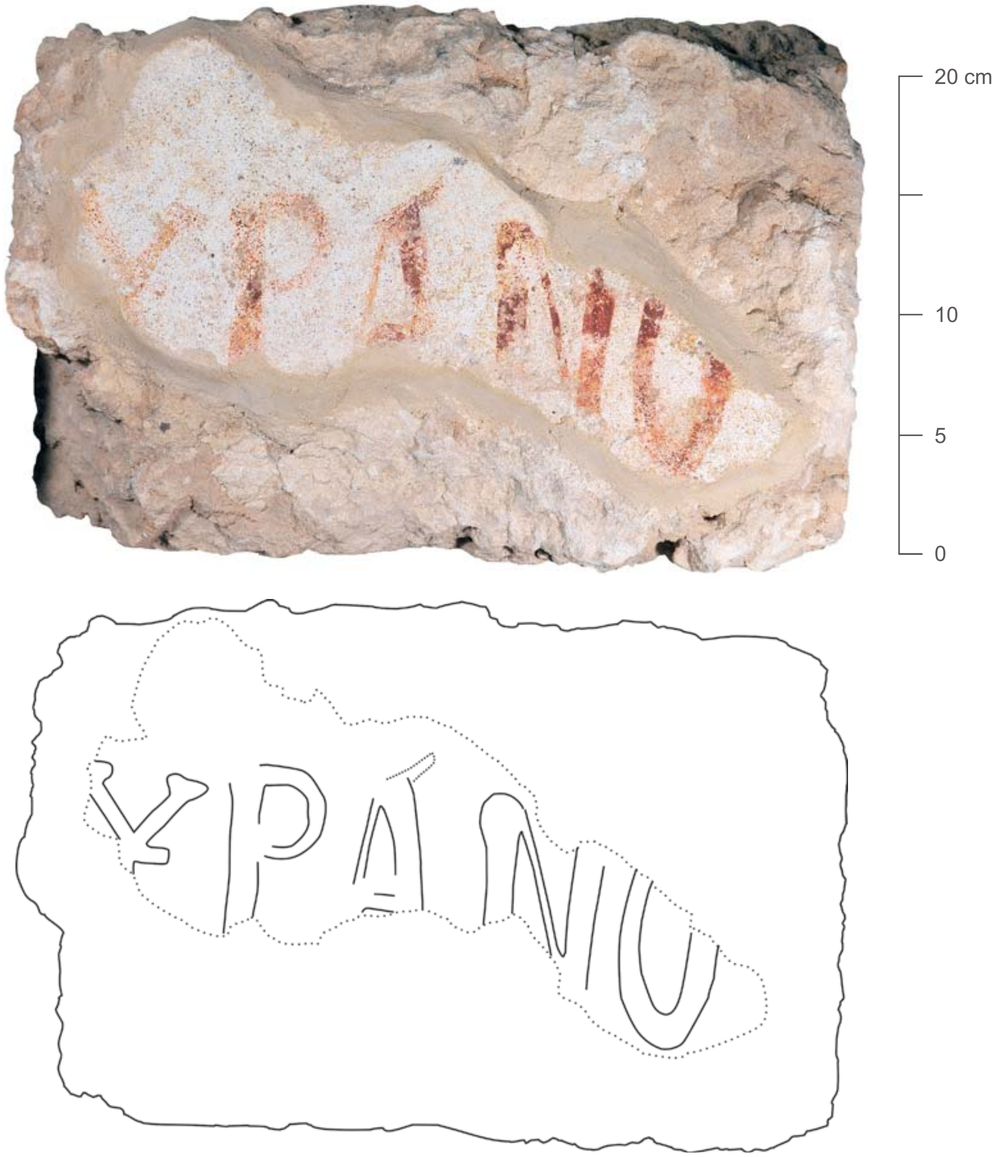
Cat. 194 *Inv. No.* 98499	*Representation* Greek inscription Letter height 7.5–8 cm	
Chapter 5: 216	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 52 (face) × 19 cm; well-dressed ashlar. *Condition*: good; minor chipping along the edges.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar. Plaster 6–10 mm thick. *Condition*: surface somewhat abraded; a few curved, parallel scuffs across the center; granular disintegration of plaster.	
Paint layer	Text likely rendered with single strokes of the brush. *Condition*: abraded and faded; powdery; thick surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After discovery (1975) and tracing

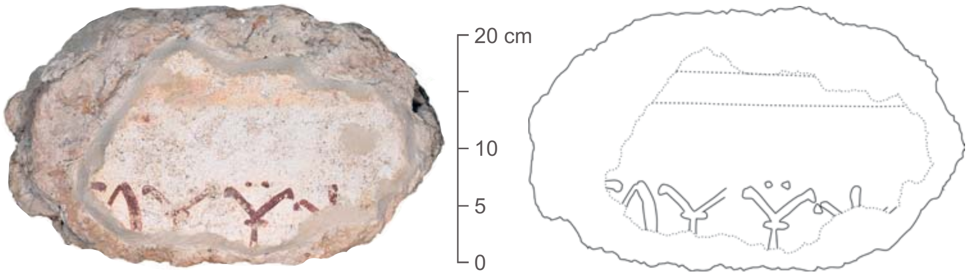
Cat. 195 *Inv. No.* –	*Representation* Greek inscription; lower line ends in a «hyphen» and a small cross. Tall and slender characters Letter height unknown	
Chapter 5: 217	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –

Cat. 196



After treatment (2017) and tracing

Cat. 196 *Inv. No.* 98482	*Representation* Greek inscription Letter height approximately 12 cm	
Chapter 5: 217	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	23 × 36 (face) × 16 cm; roughly dressed ashlar. *Condition*: bottom back corner missing; otherwise in good condition.	
Mortar/plaster	Type 2 mortar in the irregularities of the face and on the sides of the ashlar. Plaster 8–10 mm thick. *Condition*: weakened adhesion along the edges; surface pitted and abraded; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: severely abraded and faded; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of red paint layer.	



After treatment (2017) and tracing

Cat. 197

Inv. No. 98517

Chapter 5: 217

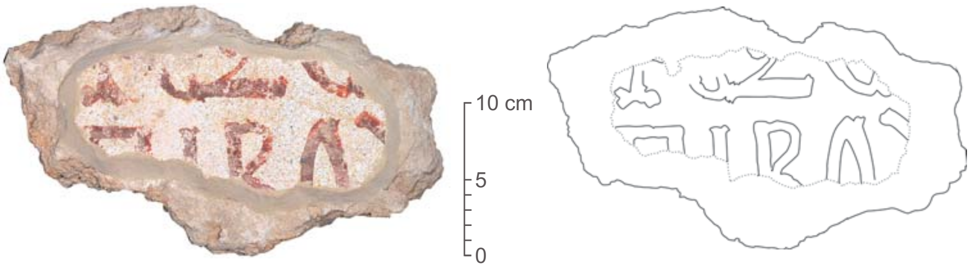
Fig. 3-3

Representation
Greek inscription; horizontal, faint orange band at the top edge
Letter height 9 cm

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	23 × 37 (face) × 13 cm; fieldstone. *Condition*: good.
Mortar/plaster	Type 1 mortar underneath the plaster and on the sides of the stone. Plaster 5–8 mm thick. *Condition*: surface abrasion; minor losses; granular disintegration of plaster.
Paint layer	Red paint applied in one layer. *Condition*: some letters abraded, others relatively well-preserved; powdery; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.



After treatment (2017) and tracing

Cat. 198

Inv. No. 97131

Chapter 5: 217

Fig. 4-14

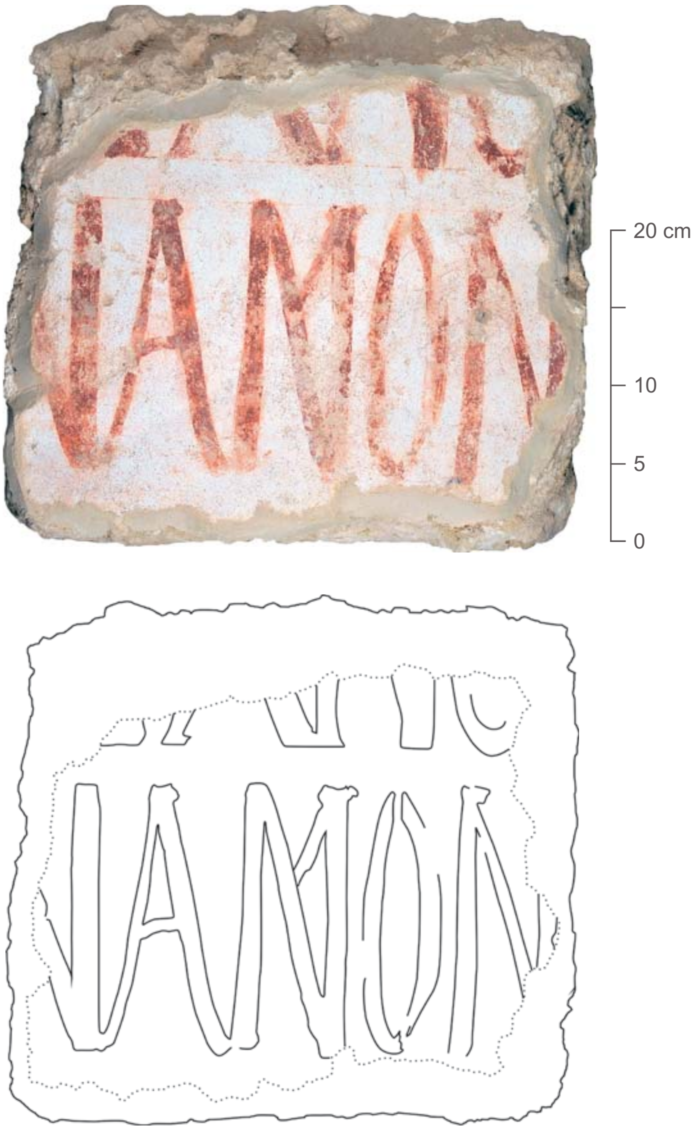
Representation
Greek inscription
Letter height 8 cm

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	15 × 29 (face) × 8 cm; fragment of a roughly dressed ashlar or fieldstone. *Condition*: broken along the bottom and left edges, fresh breaks; back side trimmed.
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 10–12 mm thick. *Condition*: minor surface abrasions; granular disintegration of plaster.
Paint layer	Red paint applied in one thick layer. *Condition*: losses and abrasions; yellowed varnish; paint sensitive after removal of varnish; surface grime; coffee(?) stain on the surface.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.

Cat. 199



After treatment (2017) and tracing

Cat. 199 *Inv. No.* 97092	*Representation* Greek inscription Letter height 18 cm	
Chapter 5: 217 *Fig. 4-12*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 39 (face) × 16 cm; roughly dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster about 10 mm thick. *Condition*: minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied in one thick layer. *Condition*: losses and abrasions; powdery and sensitive; suffusion of pigment over the plaster; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) and tracing

Cat. 200 *Inv. No.* 97119	*Representation* Greek inscription Letter height maximum 7.3 cm	
Chapter 5: 218	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 17 (face) × 7 cm; well-dressed, small ashlar. *Condition*: losses along the left edge; back side trimmed.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar and locally underneath the plaster. Plaster 6–10 mm thick; mostly directly on stone. *Condition*: small losses scattered all over the surface; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: abraded and faded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 201



After treatment (2017) and tracing

Cat. 201 *Inv. No.* JY14WP12	*Representation* Greek inscription Letter height 6 cm	
Chapter 5: 218	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	31 × 50 (face) × 18 cm; well-dressed ashlar; compact stone. *Condition*: good.	
Mortar/plaster	Plaster 3–12 mm thick; directly on the stone. *Condition*: losses and abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: abraded and faded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	





After treatment (2017) and tracing

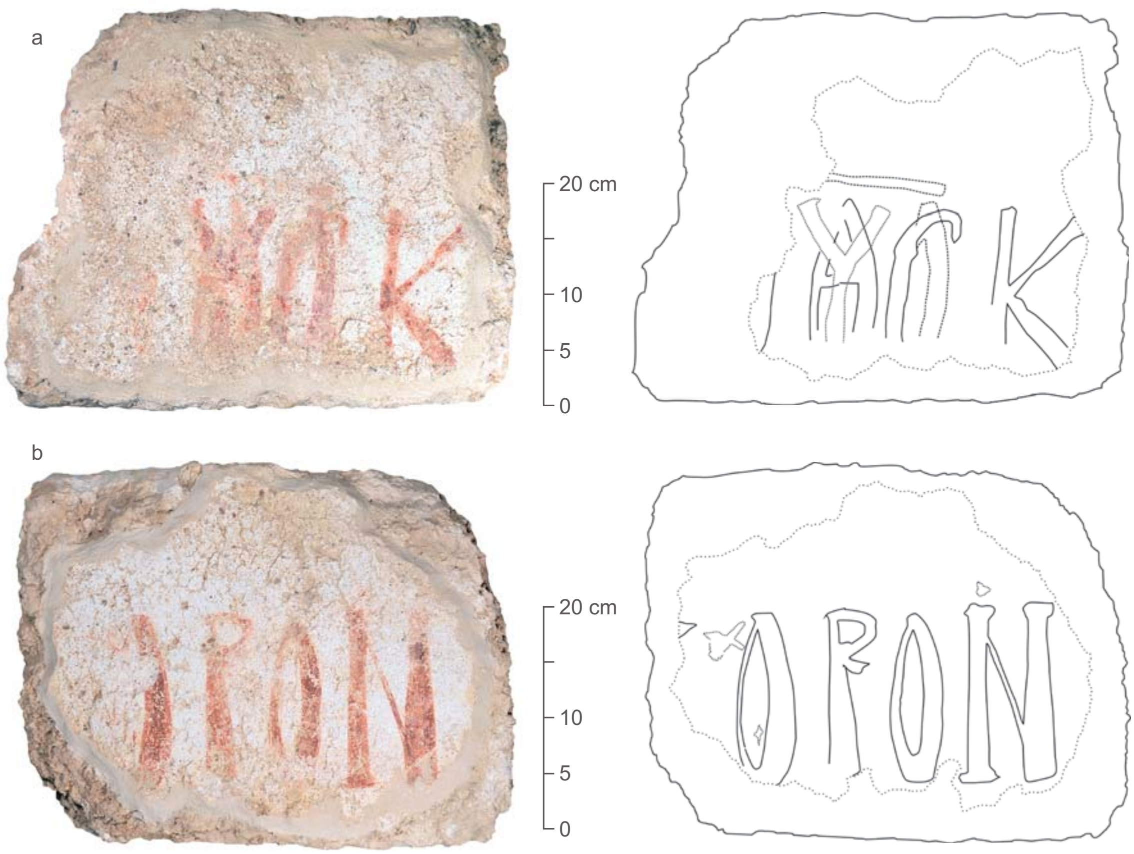
Cat. 202 *Inv. No.* 97099 *Sample* Jy001 [*Fig. 3-1*]	*Representation* Greek inscription Letter height 14 cm	
Chapter 5: 219	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	37 × 53 (face) × 19 cm; roughly dressed ashlar. *Condition*: minor losses at the corners, otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the face and on the sides of the ashlar. Plaster 5–12 mm thick. *Condition*: numerous shallow losses; broad, abraded areas; numerous cracks in the surface; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: some areas relatively well-preserved; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded places; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 203



After treatment (2017) and tracing

Cat. 203 *Inv. Nos* *a* – 97108 *b* – 97138	*Representation* Greek inscription; two fragments most probably from the same text Letter height 9.3 cm	
Chapter 5: 219	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	***a*** – 30 × 42 (face) × 7 cm; well-dressed ashlar. ***b*** – 19 × 31 (face) × 6 cm; fragment of a small ashlar. *Condition*: ***a*** – lower right corner missing, covered with mortar, indicating damage prior to use in construction; back side trimmed; horizontal cut on the right edge. ***b*** – bottom left corner missing, fresh break; back side trimmed.	
Mortar/plaster	***a*** – Type 2 mortar along the perimeter of the ashlar face and on the sides. Plaster 7–12 mm thick; mostly directly on stone. ***b*** – Type 2 mortar along the perimeter of the ashlar face. Plaster 7–12 mm thick. *Condition*: ***a*** – surface condition generally good save for abrasions in the upper left corner; ***b*** – surface condition good except for minor abrasions; ***a***, ***b*** – granular disintegration of plaster.	
Paint layer	***a***, ***b*** – red paint applied in one thick layer. *Condition*: ***a***, ***b*** – numerous losses and abrasions; yellowed varnish; paint powdery after removal of varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	



After treatment (2017) and tracing

Cat. 204 *Inv. Nos* *a* – 98505 *b* – 98558	*Representation* ***a, b*** – Greek inscription; two fragments most probably from the same text Letter height 15–16 cm	
Chapter 5: 219	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	***a*** – 36 × 46 (face) × 16 cm; well-dressed ashlar. ***b*** – 34 × 44 (face) × 19 cm; ashlar; conglomerate of bioclasts. *Condition*: ***a, b*** – generally good; ***a*** – upper left corner missing, fresh break; ***b*** – losses at the corners.	
Mortar/plaster	***a*** – Type 2 mortar along the perimeter of the ashlar face and on the sides. Plaster 6–8 mm thick. ***b*** – Type 2 mortar on the sides of the ashlar. Plaster 7–10 mm thick; directly on stone. ***a, b*** – plaster contains aggregate grains larger than other fragments. *Condition*: ***a*** – severely abraded; numerous cracks. ***b*** – poor adhesion along the edges; surface severely abraded; numerous cracks. ***a, b*** – granular disintegration of plaster facilitated by large aggregate size.	
Paint layer	***a*** – red paint applied in one layer; evidence of corrections made to the second and third character from the left. ***b*** – red paint applied in one, relatively thick layer. *Condition*: ***a*** – abraded and faint; ***b*** – losses and abrasions; ***a, b*** – powdery; surface grime.	
Treatment	Disinfection; ***a*** – consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer. ***b*** – consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

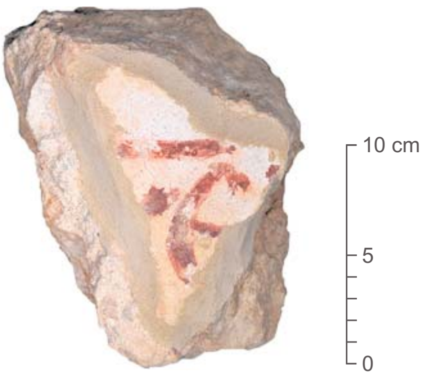
Cat. 205, 206





After discovery (1975) and tracing

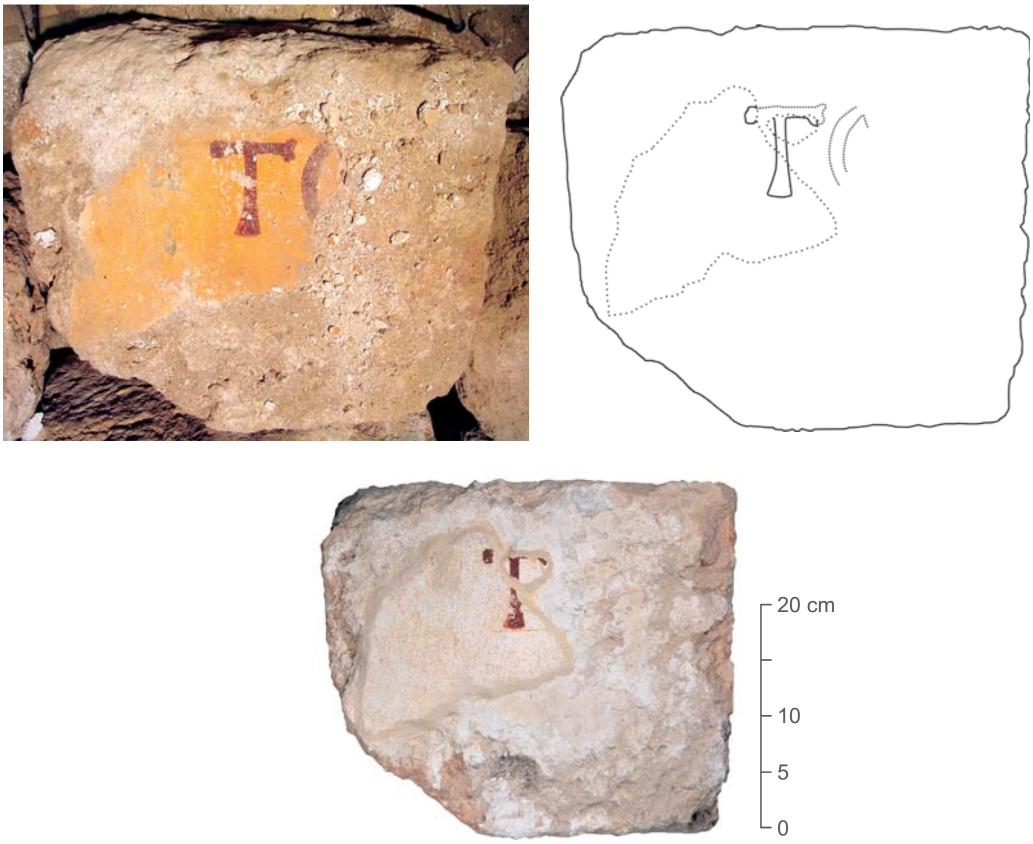
Cat. 205 *Inv. No.* –	*Representation* Greek inscription Letter height unknown	
Chapter 5: 219–220	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –





After treatment (2017) and tracing

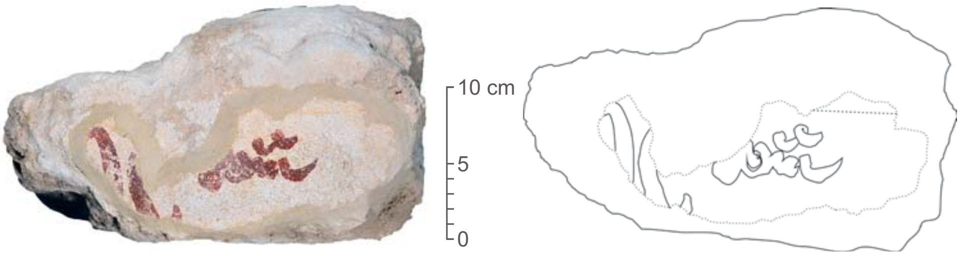
Cat. 206 *Inv. No.* 98568	*Representation* Greek inscription Letter height approximately 6 cm	
Chapter 5: 220	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	16 × 11 (face) × 30 cm; possibly fragment of an ashlar. *Condition*: broken on all sides; breaks apparently predating use in construction; one fresh-looking break on the front.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the top surface. Plaster 6–8 mm thick. *Condition*: good overall; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: losses and abrasions; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017); top, in storage (2004) and tracing

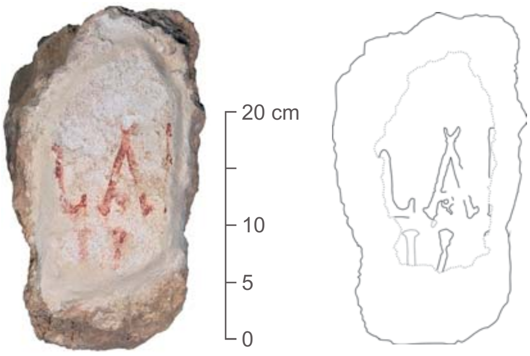
Cat. 207 *Inv. No.* 97096	*Representation* Greek inscription Letter height 7 cm	
Chapter 5: 220 *Fig. 4-10*	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 37 (face) × 20 cm; well-dressed ashlar. *Condition*: bottom left corner missing; damage possibly prior to construction.	
Mortar/plaster	Type 2 mortar on the face of the ashlar. Plaster 5–7 mm thick. *Condition*: more of the plaster was preserved at the time of discovery, including a fragmentary *omicron*; the fragment with a *tau* was found in the storage room; poor adhesion of the extant plaster; a few minor losses; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: relatively good; thick, much yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; reintegration of broken plaster fragment; application of mortar bands; removal of surface grime; removal of varnish; preventive consolidation of red paint layer.	

Cat. 208, 209



After treatment (2017) and tracing

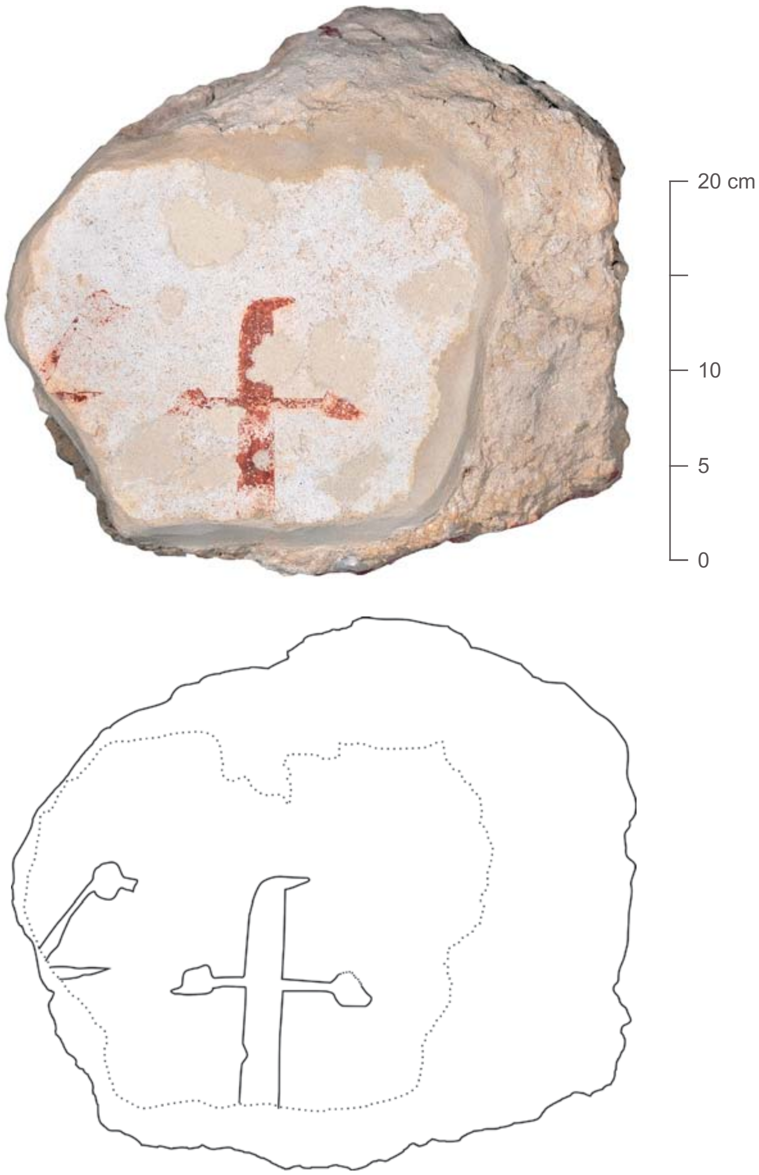
Cat. 208 *Inv. No.* 98550	*Representation* Greek inscription and a decorative end mark; faint trace of horizontal orange band at the top edge of the extant plaster. Letter height 8 cm	
Chapter 5: 220	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	14 × 27 (face) × 35 cm; roughly dressed ashlar; header shape, but positioned horizontally in the wall structure. *Condition*: losses covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the face and sides of the ashlar. Plaster 4–6 mm thick. *Condition*: minor surface abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: losses and abrasions; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) and tracing

Cat. 209 *Inv. No.* JY4WP14	*Representation* Greek inscription Letter height 8.5 cm	
Chapter 5: 220	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	31 × 17 (face) × 35 cm; roughly dressed ashlar. *Condition*: back side broken, the damage looks old; minor, fresh-looking losses on the sides.	
Mortar/plaster	Type 2 mortar remains in the cavities of the stone. Plaster about 8 mm thick. *Condition*: shallow losses and abrasions, especially in the upper area; granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

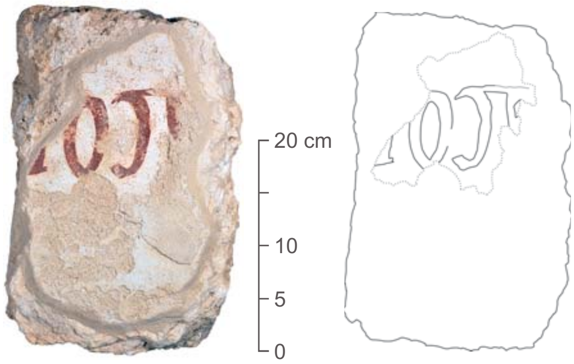
Cat. 210



After treatment (2017) and tracing

Cat. 210 *Inv. No.* JY80WP	*Representation* Greek inscription Letter height at least 12 cm	
Chapter 5: 220	*Provenance* JY80WP	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	27 × 32 (face) × 13 cm; shapeless stone, dressed only on the front. *Condition*: loss on the left side, possibly modern.	
Mortar/plaster	Type 2 mortar on the face and the sides of the stone. Plaster 5–7 mm thick. *Condition*: adhesion weakened along the edges; several shallow, round losses; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: losses and abrasions; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 211, 212



After treatment (2017) and tracing

Cat. 211 *Inv. No.* JY82WP	*Representation* Greek inscription Letter height approximately 8 cm	
Chapter 5: 220 *Fig. 4-22*	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	33 × 21 (face) × 39 cm; roughly dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 6–8 mm thick; present on two opposite sides of the ashlar, the other side plain. *Condition*: surface losses, broad and shallow; granular disintegration of plaster.	
Paint layer	Red paint applied in one, relatively thick layer. *Condition*: losses and abrasions; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After discovery (1975) and tracing

Cat. 212 *Inv. No.* –	*Representation* Greek inscription Letter height unknown	
Chapter 5: 220	*Provenance* Residential district	*Discovery / transport to Beiteddine* 1975 / –







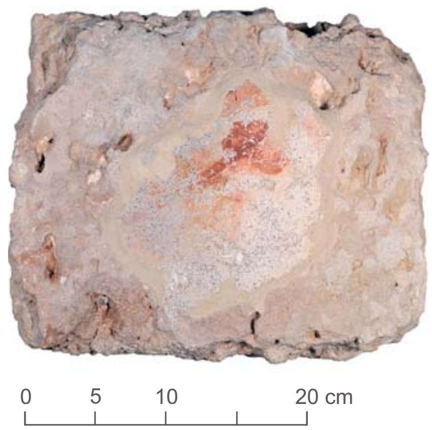
Reassembled plaster fragments (2018); epoxy(?) resin adhering to the back of the two large pieces in the lower right corner; top left, broken painted plaster in storage at the Beiteddine Palace (2004); top right, the face of the ashlar with a fragment of painted plaster and splashes of epoxy(?) resin (2018)

Cat. 213 *Inv. No.* 98527	*Representation* Unidentified	
Figs 4-5, 4-8, 4-27	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 46 (face) × 7 cm; ashlar, once well-dressed. *Condition*: back side trimmed; missing corner; black fungi noted on the back prior to conservation.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. Plaster 8–12 mm thick. *Condition*: in 2004, broken fragments of plaster were found lying on top of the ashlar face; some pieces found loose in the storeroom were reassembled, but their original setting could not be determined; epoxy(?) resin observed on the ashlar and on the back of loose plaster fragments most likely served to reattach the plaster to the stone; granular disintegration of plaster.	
Paint layer	Various colors applied wet-into-wet, rather thickly. *Condition*: thick layer of yellowed varnish on all of the fragments.	
Treatment	Disinfection; consolidation of plaster edges on the ashlar and loose fragments; reassembly of some fragments.	

Cat. 214, 215



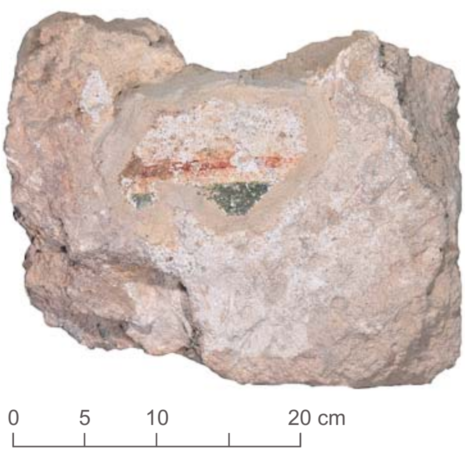
After treatment (2017) *Cat. 214*



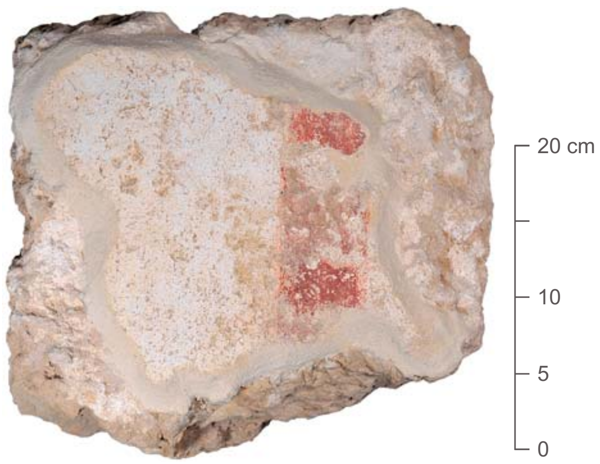
After treatment (2017) *Cat. 215*

Cat. 214 *Inv. No.* 98494 *Samples* Jy016, Jy017, Jy018 [*Fig. 3-14*]	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 42 (face) × 16 cm; ashlar, front and sides dressed, back unshapely. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the ashlar face. Plaster 8–10 mm thick, applied in two layers of similar composition. *Condition*: a number of shallow losses; two deep vertical scratches; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Applied rather thickly. *Condition*: abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 215 *Inv. No.* 97120	*Representation* Unidentified; outer rings of a medallion(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	23 × 29 (face) × 10 cm; regular, dressed ashlar. *Condition*: good overall; back side trimmed; yellow fungi noted on the back prior to conservation.	
Mortar/plaster	Type 2 mortar, only in the cavities of the stone. Plaster 5–7 mm thick. *Condition*: adhesion slightly weakened along the edges; pitted, rough surface; evidence of fire (blackened part of the plaster); granular disintegration of plaster.	
Paint layer	Buildup difficult to assess; apparently monochrome. *Condition*: severely abraded; sensitive; pigment suffused over the surface; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 216*

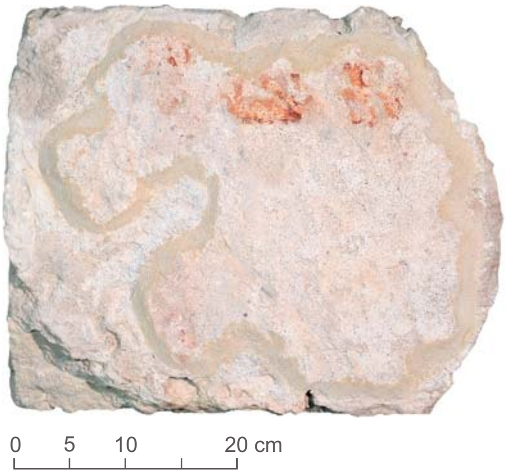


After treatment (2017) *Cat. 217*

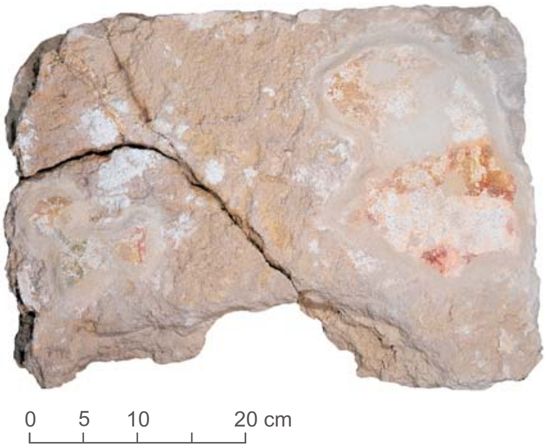
Cat. 216 *Inv. No.* 97135	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	27 × 31 (face) × 15 cm; ashlar fragment. *Condition*: concave loss along the top edge, lower left corner missing; losses covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the face of the stone. Plaster 8–10 mm thick. *Condition*: poorly preserved; surface abraded; granular disintegration of plaster.	
Paint layer	Too fragmentary for buildup assessment. *Condition*: abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 217 *Inv. No.* 98530	*Representation* Wide red band	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	28 × 32 (face) × 18 cm; well-dressed ashlar. *Condition*: bottom edge broken, break fresh; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 10–12 mm thick. *Condition*: numerous losses and pitting; large abrasion of the surface in the painted part; granular disintegration of plaster.	
Paint layer	Applied thickly. *Condition*: losses and abrasions; slightly powdery; unpainted area coated with yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded parts; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 218, 219



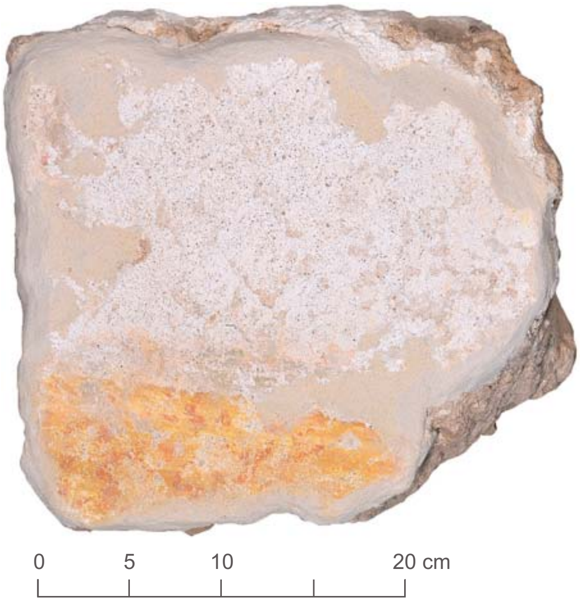
After treatment (2017) *Cat. 218*



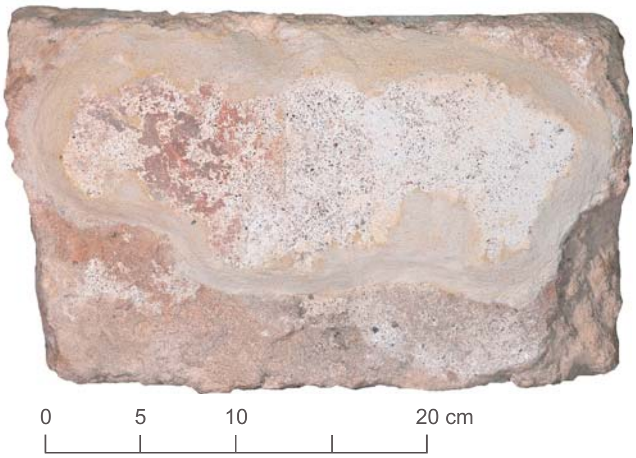
After treatment (2017) *Cat. 219*

Cat. 218 *Inv. No.* 98503	*Representation* Unidentified; reminiscent of a member of a jeweled cross	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 45 (face) × 20 cm; well-dressed ashlar; porous stone. *Condition*: two corners on the right missing, covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. Plaster 7–9 mm thick. *Condition*: surface poorly preserved; broad and deep abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess; apparently several tones of red and pink with white round impastos on top. *Condition*: abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 219 *Inv. Nos* 98540 98571	*Representation* Jeweled cross inside a medallion(?). Horizontal member of a cross on the right-hand side of the ashlar; fragment of a medallion(?) on the left	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 49 (face) × 9 cm; well-dressed ashlar; porous and crumbly stone. *Condition*: poor; broken into two large fragments (assigned separate inventory numbers) and several small ones; one fragment missing; easily disintegrating stone; back side trimmed.	
Mortar/plaster	Type 2 mortar on the ashlar face, along the edges. Plaster 6–9 mm thick. *Condition*: broad shallow losses and abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reassembling the small fragments of stone, but not the largest two, where the contact surface was too limited and too crumbly; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 220*



After treatment (2017) *Cat. 221*

Cat. 220

Inv. No. 98536

Representation
Unidentified

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	27 × 29 (face) × 14 cm; roughly dressed ashlar. *Condition*: bottom right corner missing.
Mortar/plaster	Type 2 mortar locally underneath the plaster. Plaster 5–7 mm thick. *Condition*: poor surface condition; numerous losses, cracks, and indentations; granular disintegration of plaster.
Paint layer	Buildup difficult to assess. *Condition*: abraded and faint; powdery; surface grime.
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.

Cat. 221

Inv. No. 98504

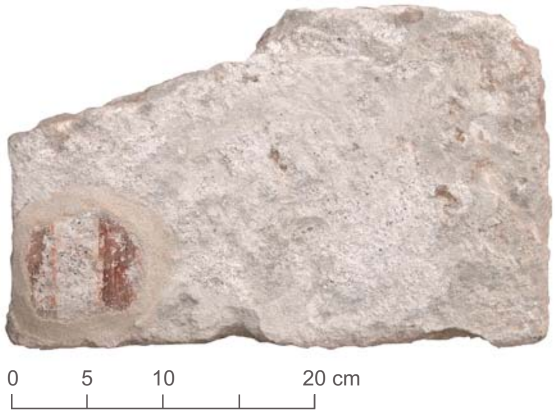
Representation
Unidentified

Provenance
Basilica

Discovery / transport to Beiteddine
1987 / about 1987

Stone	20 × 32 (face) × 14 cm; well-dressed ashlar; compact stone. *Condition*: good.
Mortar/plaster	Plaster 7–9 mm thick; directly on stone. *Condition*: broad surface abrasions; granular disintegration of plaster.
Paint layer	Applied thickly(?), several colors used. *Condition*: severely abraded; powdery; surface grime.
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.

Cat. 222, 223



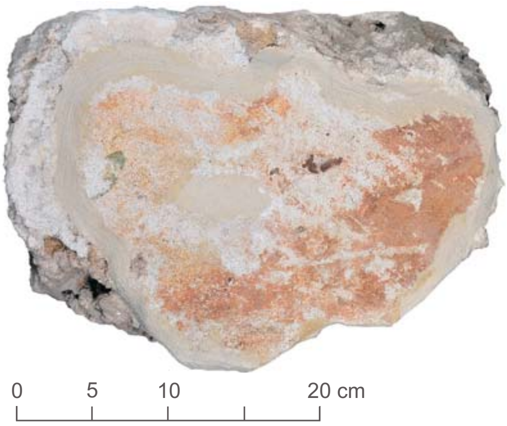
After treatment (2017) *Cat. 222*



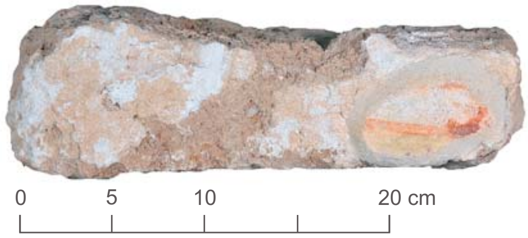
After treatment (2017) *Cat. 223*

Cat. 222 *Inv. No.* 98520	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	23 × 36 (face) × 15 cm; well-dressed ashlar; compact stone. *Condition*: upper right corner missing; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the ashlar face. Plaster 6 mm thick. *Condition*: abraded; granular disintegration of plaster.	
Paint layer	Thick, opaque layer(?). *Condition*: abraded; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 223 *Inv. No.* 97112	*Representation* Fragment of a simple red cross(?) or a letter(?)	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 26 (face) × 11 cm; roughly dressed ashlar; porous, rough stone. *Condition*: good overall; fragment broken off the back.	
Mortar/plaster	Type 2 mortar underneath the plaster. Plaster 5–7 mm thick. *Condition*: surface losses and broad abrasions; severe granular disintegration of plaster.	
Paint layer	Red paint applied in one layer. *Condition*: sensitive and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded parts; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 224*



After treatment (2017) *Cat. 225*

Cat. 224 *Inv. No.* 98523	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	24 × 33 (face) × 17 cm; fragment of a roughly dressed ashlar; porous stone. *Condition*: lower side broken, fresh break.	
Mortar/plaster	Type 2 mortar at the edges of the ashlar face. Plaster 10–12 mm thick. *Condition*: broad abrasions and some shallow losses; granular disintegration of plaster.	
Paint layer	Pinkish-buff color applied very thickly; visible tonal transitions. *Condition*: abraded, powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

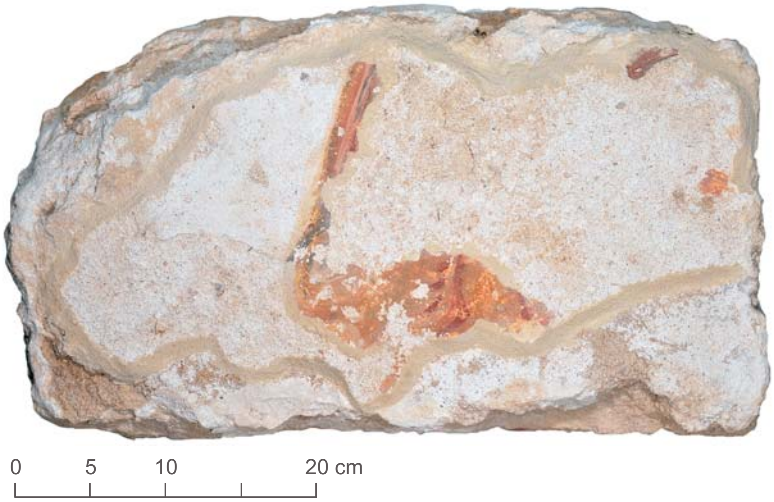
Cat. 225 *Inv. No.* 98510	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	9 × 28 (face) × 33 cm; well-dressed narrow ashlar; position in the wall structure most likely vertical. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the ashlar face and sides. Plaster 8–10 mm thick. *Condition*: good overall; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: faded; red elements powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 226



After treatment (2017)

Cat. 226 *Inv. No.* JY78WP *Samples* Jy008 [*Fig. 3-15*] Jy009 [*Fig. 3-10*]	*Representation* Unidentified *Provenance* Residential district	 *Discovery / transport to Beiteddine* 2000s / 2012
Stone	36 × 46 (face) × 17 cm; roughly dressed ashlar; natural cavities in the stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar on ashlar face and sides. Plaster 5–10 mm thick. *Condition*: minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Applied rather thickly, wet-into-wet; visible brushstrokes. *Condition*: minor losses; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	



After treatment (2017) *Cat. 227*



After treatment (2017) *Cat. 228*

Cat. 227 *Inv. No.* Jy94WP	*Representation* Unidentified; an animal(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	28 × 50 (face) × 17 cm; large ashlar. *Condition*: upper left corner missing, covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar in a thick layer underneath the plaster and on the ashlar sides. Plaster 4–7 mm thick. *Condition*: most of the plaster surface completely abraded; adhesion weakened along the edges; granular disintegration of plaster.	
Paint layer	Applied thickly, possibly wet-into-wet as particular colors are mixed; marked brushstrokes running in various directions. *Condition*: minor losses; dusty.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; reattachment of plaster to stone support; application of mortar bands; dusting; preventive consolidation of paint layer.	

Cat. 228 *Inv. No.* JY100WP	*Representation* Unidentified	
Fig. 3-28	*Provenance* Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	20 × 14 (face) × 16 cm; fieldstone bound to another stone with mortar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on all sides of the stone. Plaster about 10 mm thick. *Condition*: relatively good; a few cracks in the surface; granular disintegration of plaster.	
Paint layer	Applied thickly, wet-into-wet as evidenced by mixing of superimposed colors; paint handling somewhat careless. *Condition*: good; dark orange parts slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

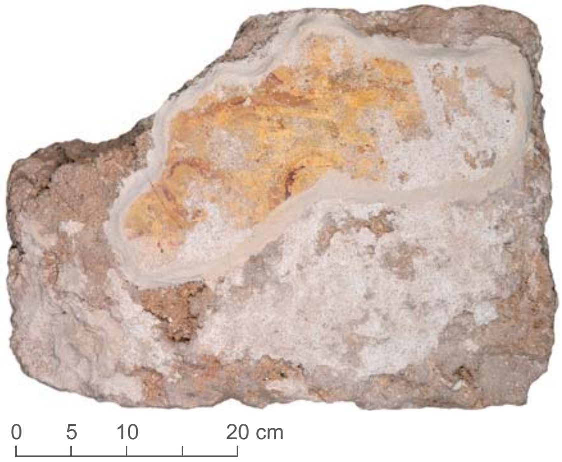
Cat. 229



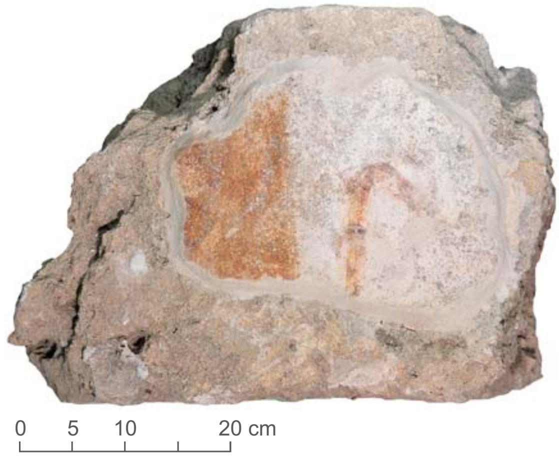


After discovery (2010); bottom, after treatment (2017)

Cat. 229 *Inv. No.* JY105WP	*Representation* Unidentified; terminal of a cross(?) in the upper right corner; another object resembling *Cat. 228* in the upper left part of the plaster (documented at the time of discovery; now lost); a red object at bottom right may be a flower	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	13 × 34 (face) × 39 cm; well-dressed, corbel-like element with projecting triangular profile as in *Cat. 31acd.* *Condition*: projecting profile partly broken, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 6 mm thick. *Condition*: plaster partly disintegrated in storage; small losses and abrasions; granular disintegration of plaster.	
Paint layer	Relatively thickly applied; probably wet-into-wet; palette of colors and paint handling similar to *Cat. 228.* *Condition*: losses and abrasions; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 230*

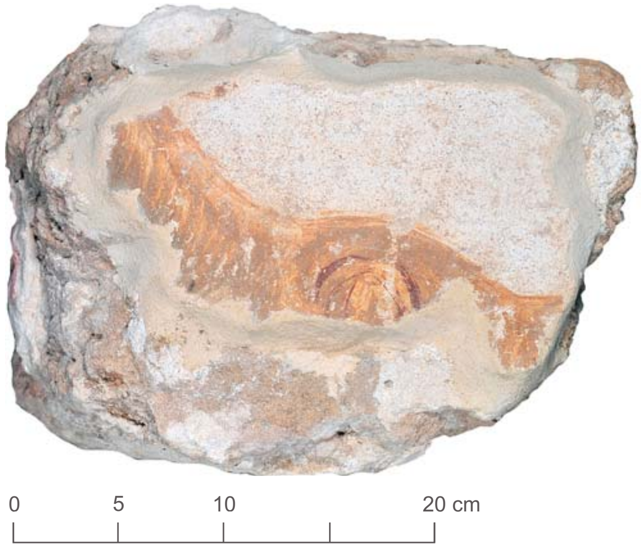


After treatment (2017) *Cat. 231*

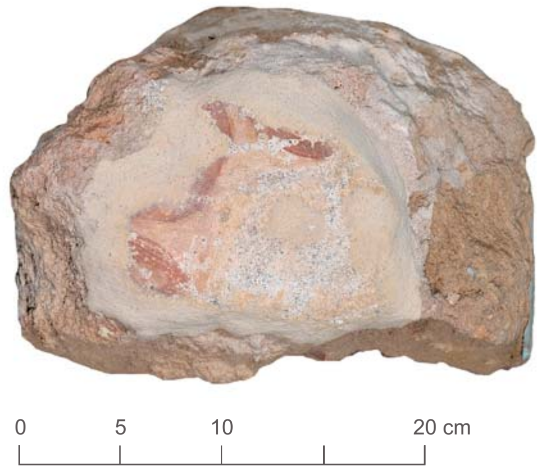
Cat. 230 *Inv. No.* –	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	36 × 49 (face) × 17 cm; ashlar; porous stone, numerous cavities. *Condition*: upper left corner missing; apparently fresh break.	
Mortar/plaster	Type 2 mortar on the lower left corner of the ashlar face and on the sides. Plaster 6–8 mm thick. *Condition*: numerous abrasions; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Three layers: semi-transparent yellow base color; circles rendered with opaque ocher and red on top; paint handling quick and broad. *Condition*: abrasions and losses; red parts powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 231 *Inv. No.* JY2WP13	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	44 × 51 (face) × 14 cm; ashlar; porous stone with large cavities. *Condition*: upper left corner missing, fresh break; loss at the bottom right corner, possibly old damage.	
Mortar/plaster	Type 2 mortar remains on the face and sides. Plaster 6–7 mm thick. *Condition*: minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Thickly applied(?). *Condition*: losses and abrasions; powdery; surface grime; hard, mortar-like deposits adhering to the surface.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 232, 233



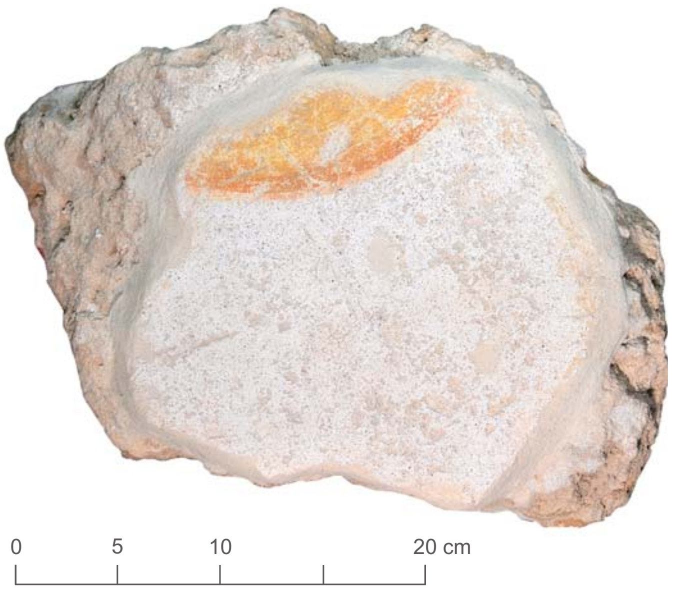
After treatment (2017) *Cat. 232*



After treatment (2017) *Cat. 233*

Cat. 232 *Inv. No.* JY6WP14	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	21 × 29 (face) × 42 cm; roughly dressed stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar locally underneath the plaster and in cavities on the sides of the stone. Plaster about 8 mm thick. *Condition*: jagged plaster edges; surface abrasions; granular disintegration of plaster.	
Paint layer	Applied rather thickly, wet-into-wet. *Condition*: minor losses and scuffs; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 233 *Inv. No.* JY51WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	17 × 25 (face) × 25 cm; roughly dressed ashlar fragment. *Condition*: broken at the bottom, fresh break; edges rounded.	
Mortar/plaster	Type 1 mortar on one of the sides; Type 2 mortar on other sides and underneath the plaster. Plaster 6–9 mm thick. *Condition*: minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: minor losses and abrasions; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	



After treatment (2017) *Cat. 234*

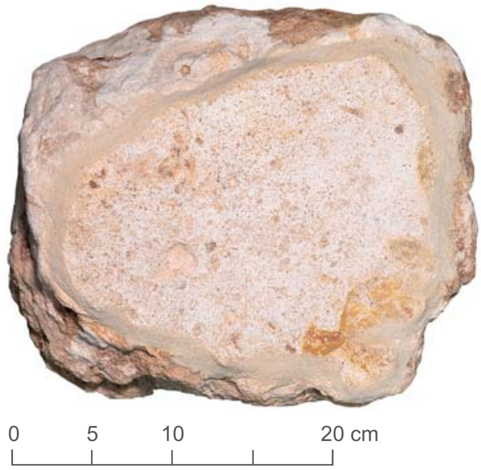


After treatment (2017) *Cat. 235*

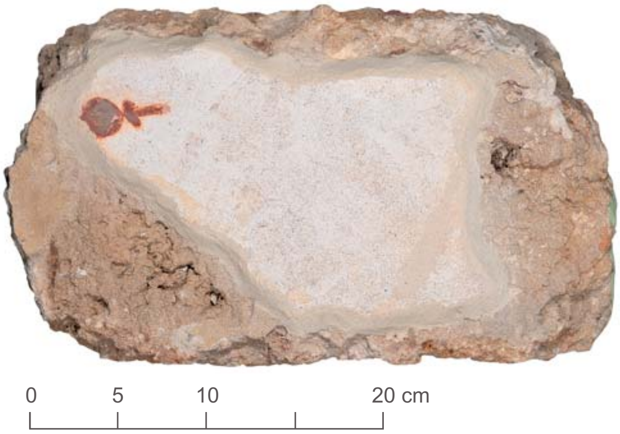
Cat. 234 *Inv. No.* JY84WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	22 × 32 (face) × 28 cm; fieldstone. *Condition*: good.	
Mortar/plaster	Type 2 mortar on all sides of the stone and locally underneath the plaster. Plaster about 8 mm thick. *Condition*: surface pitted and abraded; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: losses and abrasions; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of paint layer.	

Cat. 235 *Inv. No.* JY3WP12	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	22 × 13 (face) × 20 cm; roughly dressed ashlar, face well-dressed, back unshapely. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the ashlar sides. Plaster 6–7 mm thick. *Condition*: relatively good; minor abrasions and gouges; granular disintegration of plaster.	
Paint layer	Green paint applied thickly with a wide brush on top of beige base color. *Condition*: relatively good; minor abrasions and losses; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; preventive consolidation of the paint layer.	

Cat. 236, 237



After treatment (2017) *Cat. 236*

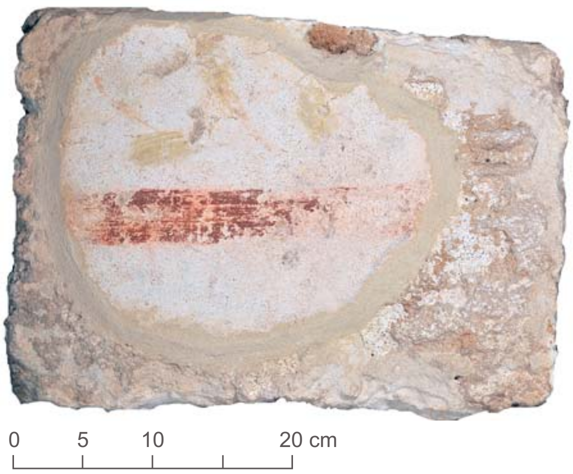


After treatment (2017) *Cat. 237*

Cat. 236 *Inv. No.* –	*Representation* Unidentified; orange, pomegranate-shaped fruit at bottom right	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	24 × 28 (face) × 13 cm; fieldstone. *Condition*: good.	
Mortar/plaster	Type 2 mortar in large amounts underneath the plaster and on the ashlar sides. Plaster about 8 mm thick. *Condition*: abrasions and pits in the surface; granular disintegration of plaster.	
Paint layer	Solid, relatively thick. *Condition*: abraded; slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 237 *Inv. No.* JY64WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	19 × 34 (face) × 19 cm; fieldstone, face dressed. *Condition*: good.	
Mortar/plaster	Type 2 mortar in the cavities on the sides of the stone and locally underneath the plaster. Plaster 6–9 mm thick. *Condition*: losses, gouges, and abrasions to the surface; slight detachment in the painted area; granular disintegration of plaster.	
Paint layer	Green roundel applied on top of red outlines. *Condition*: powdery; suffusion of red pigment over the plaster; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to the stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 238, 239



After treatment (2017) *Cat. 238*



After treatment (2017) *Cat. 239*

Cat. 238 *Inv. No.* JY1WP12	*Representation* Red horizontal band; above it, remains of green leaf-like elements	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	27 × 40 (face) × 26 cm; well-dressed ashlar. *Condition*: fungi noted on the sides of the ashlar prior to conservation; otherwise in good condition.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. Plaster about 8 mm thick; directly on stone. *Condition*: weakened adhesion along the edges; surface losses and abrasions; granular disintegration of plaster.	
Paint layer	Applied in one, relatively thick layer. *Condition*: severely abraded; green elements faded; red band powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; reattachment of plaster to stone support; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 239 *Inv. No.* JY22WP12	*Representation* Red horizontal band	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	36 × 46 (face) × 15 cm; well-dressed ashlar. *Condition*: good except for black moss on the sides of the ashlar noted prior to conservation.	
Mortar/plaster	Type 2 mortar locally underneath the plaster. Plaster 5–12 mm thick. *Condition*: surface losses and abrasions; very rough surface; minor cracks; granular disintegration of plaster.	
Paint layer	Single brushstroke. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 240, 241



After treatment (2017) *Cat. 240*



After treatment (2017) *Cat. 241*

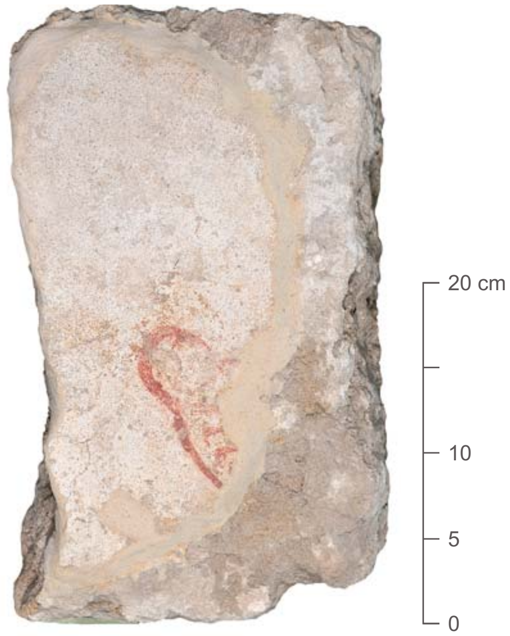
Cat. 240 *Inv. No.* JY7WP13	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	11 × 23 (face) × 20 cm; fieldstone. *Condition*: fresh-looking loss at the left front side.	
Mortar/plaster	Type 2 mortar in large lumps on the sides; also locally underneath the plaster. Plaster about 8 mm thick. *Condition*: relatively good; minor losses and abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied with single strokes, moderately thick. *Condition*: partly abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 241 *Inv. No.* –	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	14 × 38 (face) × 19 cm; roughly dressed ashlar; porous stone, numerous cavities. *Condition*: good; top side broken, covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 1 mortar on the sides of the stone; possibly some Type 2 mortar underneath the plaster. Plaster 8–10 mm thick. *Condition*: a few minor losses; granular disintegration of plaster.	
Paint layer	Red paint applied with single strokes, moderately thick. *Condition*: partly abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 242, 243



After treatment (2017) *Cat. 242*



After treatment (2017) *Cat. 243*

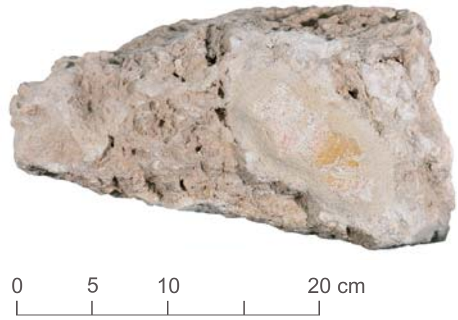
Cat. 242 *Inv. No.* –	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	32 × 16 (face) × 19 cm; well-dressed ashlar fragment. *Condition*: one side broken, covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar remains on the sides. Plaster 5–7 mm thick; directly on stone. *Condition*: surface abrasions; granular disintegration of plaster.	
Paint layer	Red paint applied with single strokes, moderately thick. *Condition*: partly abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 243 *Inv. No.* JY20WP12	*Representation* Unidentified; a bird(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in the 2000s / 2016
Stone	36 × 26 (face) × 13 cm; fragment of an ashlar. *Condition*: left side broken, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 6–10 mm thick. *Condition*: rough, pitted surface; some cracks; granular disintegration of plaster.	
Paint layer	Red paint applied with single strokes. *Condition*: partly abraded and powdery; remains of yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; removal of varnish; consolidation of powdery paint layer.	

Cat. 244, 245



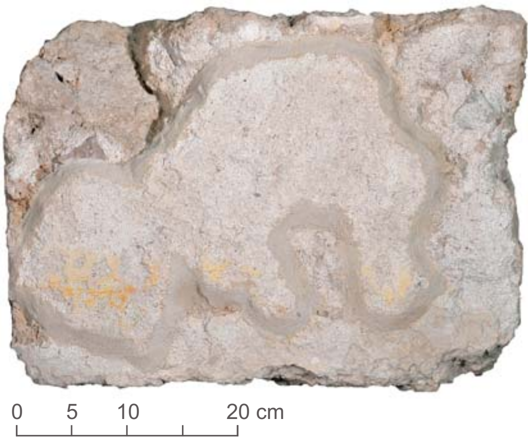
After treatment (2017) *Cat. 244*



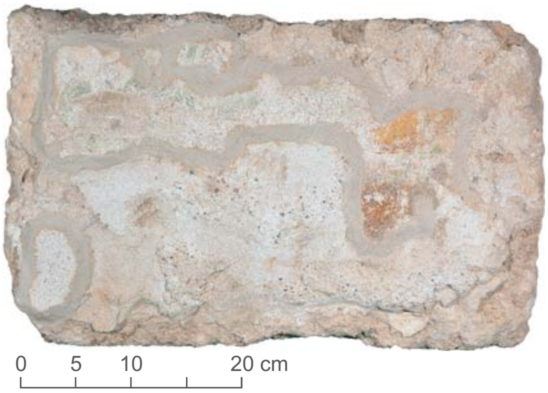
After treatment (2017) *Cat. 245*

Cat. 244 *Inv. No.* JY12WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	25 × 33 (face) × 16 cm; roughly dressed ashlar. *Condition*: good; minor chipping.	
Mortar/plaster	Type 2 mortar locally underneath the plaster and on the sides. Plaster 6–9 mm thick; mostly directly on stone. *Condition*: severe surface deterioration; numerous abrasions and losses; granular disintegration of plaster.	
Paint layer	Red paint applied with single strokes, moderately thick. *Condition*: partly abraded and powdery; yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 245 *Inv. No.* 98511	*Representation* Unidentified; fragment of a yellow ring(?) surrounding a medallion	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	14 × 29 (face) × 36 cm; narrow, flat, roughly dressed ashlar, original position in the wall structure possibly vertical. *Condition*: good overall.	
Mortar/plaster	Type 2 mortar remains on the edges. Plaster 6–9 mm thick; directly on stone. *Condition*: surface abrasions and losses; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: severely abraded save for the yellow ring, which was likely painted with thick paint; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 246*

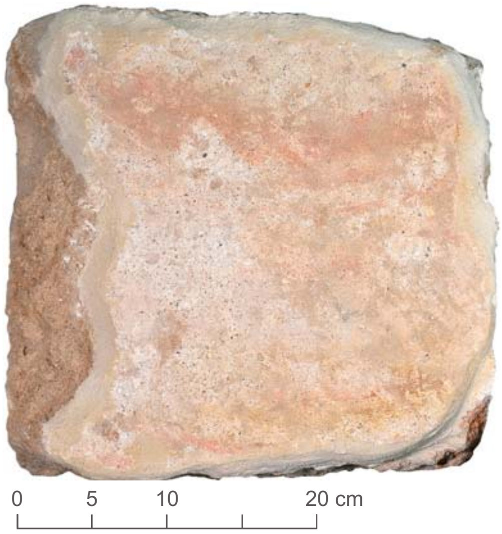


After treatment (2017) *Cat. 247*

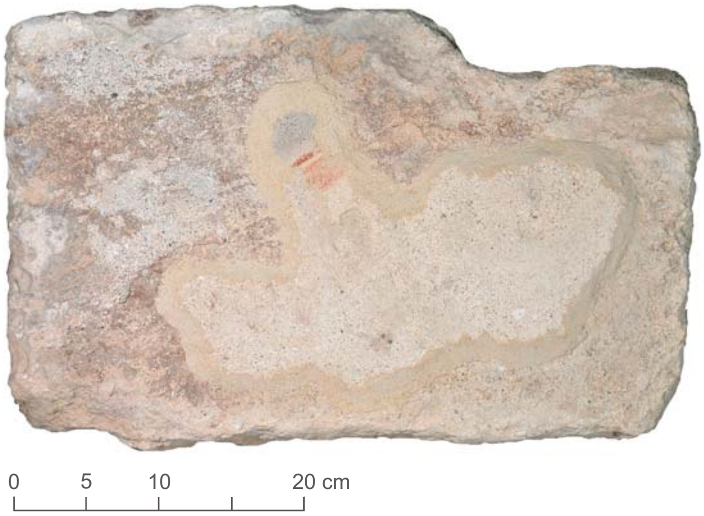
Cat. 246 *Inv. No.* 97000 *Samples* Jy012 [*Fig. 3-13*] Jy013 [*Fig. 3-9*]	*Representation* Unidentified *Provenance* Basilica	 *Discovery / transport to Beiteddine* 1987 / about 1987
Stone	33 × 47 (face) × 18 cm; roughly dressed ashlar. *Condition*: upper left corner missing, fresh break.	
Mortar/plaster	Type 2 mortar on the ashlar face compensating for surface irregularities. Plaster 7–12 mm thick. *Condition*: surface severely deteriorated; broad abrasions and numerous losses; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: very little paint survives; slightly yellowed, glossy varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime.	

Cat. 247 *Inv. No.* 97088 *Sample* Jy043	*Representation* Unidentified; vegetal representation(?) on the left *Provenance* Basilica	 *Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 49 (face) × 15 cm; well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the face, compensating for surface irregularities. Plaster about 7 mm thick. *Condition*: surface almost completely deteriorated; broad abrasions and numerous losses; granular disintegration of plaster.	
Paint layer	Relative thin layer of green paint; yellow and brown elements slightly thicker. *Condition*: severely abraded; yellow and brown elements powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 248, 249



After treatment (2017) *Cat. 248*



After treatment (2017) *Cat. 249*

Cat. 248 *Inv. No.* 98554	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	31 × 32 (face) × 17 cm; relatively well-dressed ashlar. *Condition*: chipping along the left edge; otherwise in good condition.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 8–10 mm thick. *Condition*: shallow losses and abrasions; very rough surface; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: severely abraded and faded; suffusion of pigment on the surface; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 249 *Inv. No.* 98551	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	27 × 49 (face) × 17 cm; well-dressed ashlar; shallow groove carved in the upper right corner. *Condition*: good.	
Mortar/plaster	Type 2 mortar along the perimeter of the face and on the sides. Plaster about 6 mm thick; directly on stone. *Condition*: severe surface abrasions; granular disintegration of plaster.	
Paint layer	Almost no paint preserved; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of the remaining paint layer.	



After treatment (2017) *Cat. 250*



After treatment (2017) *Cat. 251*

Cat. 250 *Inv. No.* 98555	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	34 × 50 (face) × 22 cm; fragment of an ashlar. *Condition*: upper right corner missing, fresh break.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face and on the sides. Plaster 6–8 mm thick. *Condition*: losses and abrasions; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 251 *Inv. No.* 98576	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	20 × 19 (face) × 20 cm; well-dressed ashlar fragment. *Condition*: back side broken; fresh break.	
Mortar/plaster	Type 2 mortar along the perimeter of the ashlar face and on the sides. Plaster 8–10 mm thick. *Condition*: shallow abrasions; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 252, 253



After treatment (2017) *Cat. 252*



After treatment (2017) *Cat. 253*

Cat. 252 *Inv. No.* 97102 *Samples* Jy014 [*Fig 3-13*] Jy015 [*Fig 3-9*]	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 42 (face) × 16 cm; roughly dressed ashlar. *Condition*: fresh chip in the upper left corner; other losses at the corners covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar and partly underneath the plaster. Plaster 6–8 mm thick. *Condition*: broad and shallow losses and abrasions; granular disintegration of plaster.	
Paint layer	Remains of thinly applied yellow paint; green paint thick, with marked brushstrokes. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 253 *Inv. No.* 97103	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	37 × 50 (face) × 20 cm; roughly dressed ashlar. *Condition*: good; missing upper right corner covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. Plaster 5–9 mm thick; mostly directly on stone. *Condition*: severe surface deterioration; broad abrasions; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: surviving patch of paint powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) *Cat. 254*



After treatment (2017) *Cat. 255*

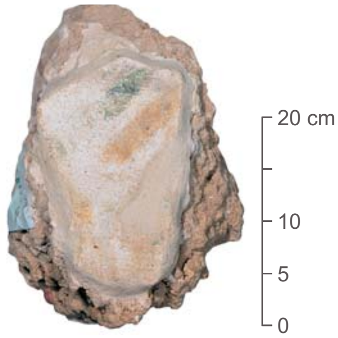
Cat. 254 *Inv. No.* 97107	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 38 (face) × 9 cm; well-dressed ashlar once. *Condition*: three corners missing; one of these found in the storeroom; fresh breaks; back side trimmed.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. Plaster 6–12 mm thick; directly on stone. *Condition*: a few large losses; minor abrasions; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded; slightly yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; integration of the broken corner; application of mortar bands; filling in the joint; removal of surface grime; removal of varnish; preventive consolidation of remaining paint layer.	

Cat. 255 *Inv. No.* 97147	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	13 × 11 (face) × 8 cm; corner of an ashlar. *Condition*: fresh break; could not be matched to any other ashlar.	
Mortar/plaster	Type 2 mortar on the sides. Plaster about 10 mm thick; present on two sides. *Condition*: granular disintegration of plaster.	
Paint layer	Thickly applied. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 256, 257



After treatment (2017) *Cat. 256*

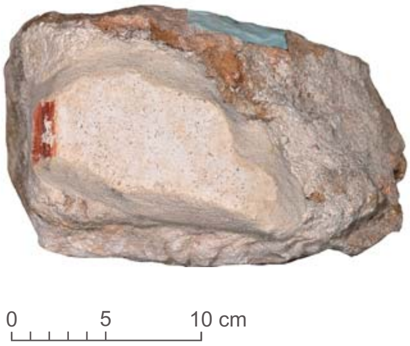


After treatment (2017) *Cat. 257*

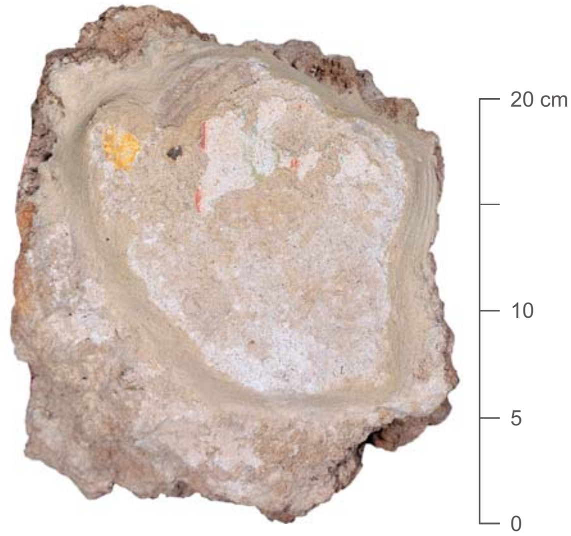
Cat. 256 *Inv. No.* 98484	*Representation* Unidentified	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	38 × 57 (face) × 16 cm; well-dressed ashlar. *Condition*: good; minor chip losses along the edges.	
Mortar/plaster	Type 2 mortar on all sides of the ashlar. Plaster 5–7 mm thick. *Condition*: severely abraded surface; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 257 *Inv. No.* JY31WP12	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	31 × 22 (face) × 17 cm; porous fieldstone. *Condition*: fragment missing, fresh break.	
Mortar/plaster	Type 2 mortar on the sides and underneath the plaster. Plaster 8–10 mm thick. *Condition*: shallow losses and abrasions; patch of mortar adhering to the plaster on the bottom side; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded and faded; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; preventive consolidation of powdery paint layer.	

Cat. 258, 259



After treatment (2017) *Cat. 258*

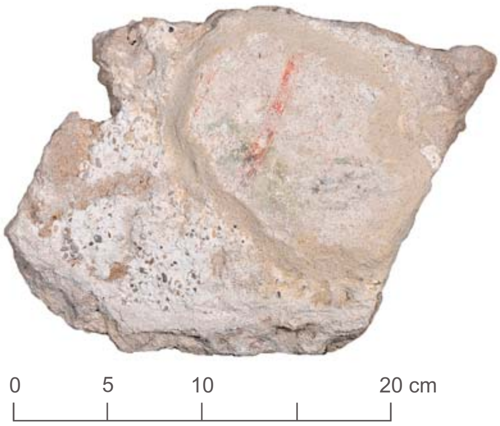


After treatment (2017) *Cat. 259*

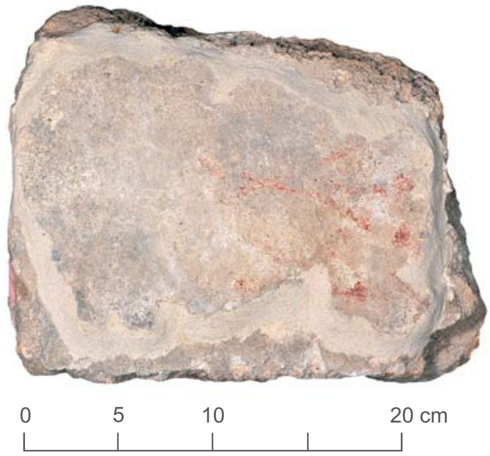
Cat. 258 *Inv. No.* Jy85WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	11 × 20 (face) × 12 cm; fieldstone or fragment of a roughly dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 5–12 mm thick; folded over the left edge. *Condition*: plaster patch slightly larger upon discovery; granular disintegration of plaster.	
Paint layer	Applied in a relatively thick layer. *Condition*: surviving paint in good condition; slightly powdery; dusty.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting; consolidation of powdery paint layer.	

Cat. 259 *Inv. No.* JY101WP	*Representation* Outer rings of a medallion(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 1975 and again in 2000s / 2016
Stone	22 × 20 (face) × 14 cm; fieldstone. *Condition*: crumbly stone with a tendency to disintegrate; evidence of fresh breaks.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides. Plaster 6–8 mm thick. *Condition*: poor; surface almost completely abraded; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: poor due to plaster deterioration; remains of slightly yellowed varnish; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; removal of varnish.	

Cat. 260, 261



After treatment (2017) *Cat. 260*



After treatment (2017) *Cat. 261*

Cat. 260

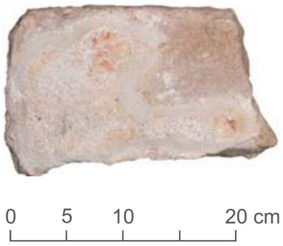
Inv. No. JY28WP12

	Representation Outer ring of a medallion(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	17 × 26 (face) × 2.5 cm; flat stone. *Condition*: back side looks like a fresh break, although it was not trimmed.	
Mortar/plaster	Type 2 mortar along the perimeter of the stone. Plaster 6–9 mm thick. *Condition*: abraded; granular disintegration of plaster.	
Paint layer	Buildup difficult to assess. *Condition*: faint and severely abraded; sensitive and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 261

Inv. No. JY26WP12

	Representation Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	20 × 25 (face) x 11 cm; roughly dressed ashlar; porous stone. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath most of the plaster and on the sides. Plaster 8–10 mm thick. *Condition*: surface severely deteriorated; broad abrasions; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded and faded; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017)
Cat. 262

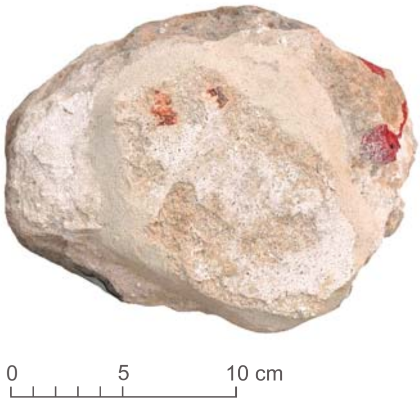


After treatment (2017) and tracing of remains of paint *Cat. 263*

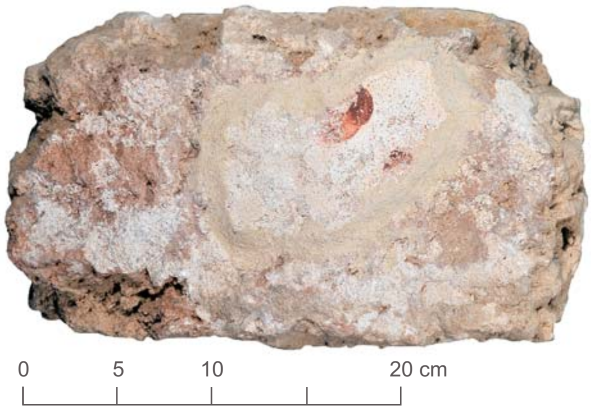
Cat. 262 *Inv. No.* JY50WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	15 × 25 (face) × 3.5 cm; fragment of a flagstone. *Condition*: two sides broken; break on the right side fresh; break on the bottom apparently old.	
Mortar/plaster	Type 2 mortar along the perimeter of the stone face. Plaster about 5 mm thick. *Condition*: severe surface abrasion; jagged plaster edges; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess buildup. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 263 *Inv. No.* JY68WP	*Representation* Unidentified; knobbed terminal of a simple red cross(?)	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	34 × 51 (face) × 14 cm; large, well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on all sides of the ashlar. Plaster 5–7 mm thick. *Condition*: losses and abrasions, especially on the right side; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess the buildup. *Condition*: abraded remains of red paint layer; powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 264, 265



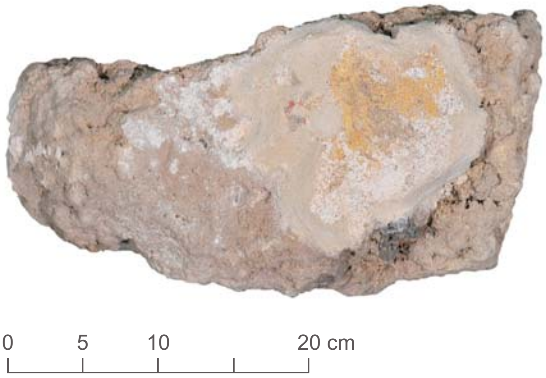
After treatment (2017) *Cat. 264*



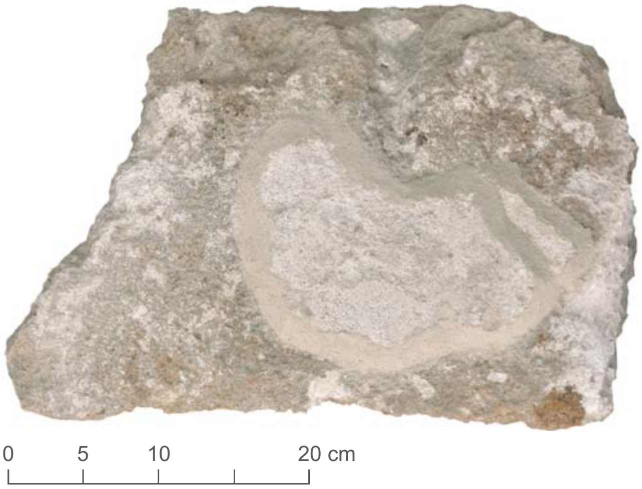
After treatment (2017) *Cat. 265*

Cat. 264 *Inv. No.* JY81WP	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	15 × 18 (face) × 13 cm; fieldstone. *Condition*: good; the red paint on the right is modern paint used to write inventory numbers.	
Mortar/plaster	Type 2 mortar locally underneath the plaster and on all sides of the stone. Plaster 8–10 mm thick. *Condition*: broad and shallow losses; granular disintegration of plaster.	
Paint layer	Too poorly preserved to assess the buildup. *Condition*: abraded and powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	

Cat. 265 *Inv. No.* –	*Representation* Unidentified	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2012
Stone	18 × 32 (face) × 40 cm; roughly dressed ashlar, original position in the wall structure possibly vertical. *Condition*: minor loss to the bottom left corner; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar. Plaster 5–7 mm thick; directly on stone. *Condition*: numerous losses; granular disintegration of plaster.	
Paint layer	Too poorly preserved for buildup to be assessed. *Condition*: slightly powdery; surface grime.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; removal of surface grime; consolidation of powdery paint layer.	



After treatment (2017) ***Cat. 266***

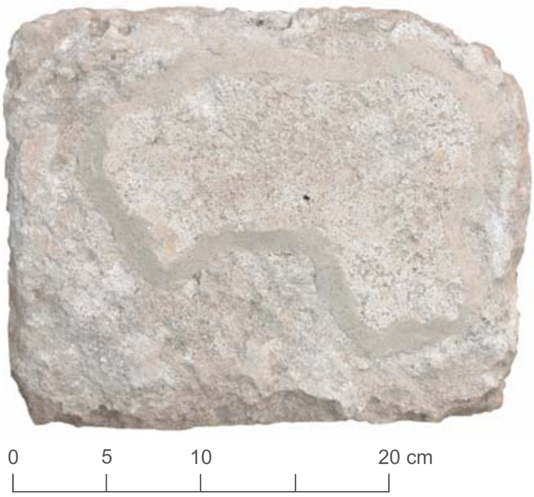


After treatment (2017) ***Cat. 267***

Cat. 266 *Inv. No.* 98532	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	19 × 36 (face) × 17 cm; fragment of a roughly dressed ashlar; porous stone. *Condition*: broken, fresh break; very crumbly.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar. Plaster about 7 mm thick. *Condition*: severe surface abrasions; jagged plaster edges; granular disintegration of plaster; yellowed varnish on the plaster.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	

Cat. 267 *Inv. No.* 98496	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	27 × 41 (face) × 18 cm; well-dressed ashlar. *Condition*: upper right corner missing, fresh break; otherwise no damages.	
Mortar/plaster	Type 2 mortar locally underneath the plaster and on the sides. Plaster about 8 mm thick. *Condition*: broad, shallow surface losses; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	

Cat. 268, 269



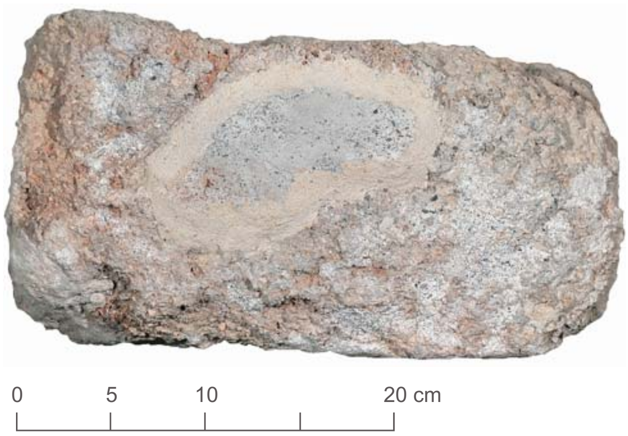
After treatment (2017) *Cat. 268*



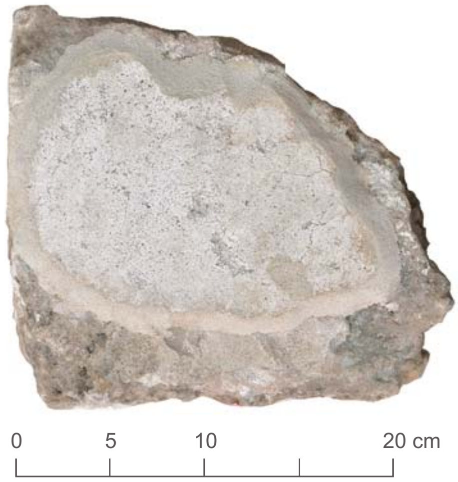
After treatment (2017) *Cat. 269*

Cat. 268 *Inv. No.* 98535	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	21 × 28 (face) × 20 cm; well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar underneath the plaster and on the sides of the ashlar. Plaster 4–6 mm thick. *Condition*: surface abrasions; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting.	

Cat. 269 *Inv. No.* 98497	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	14 × 32 (face) × 42 cm; roughly dressed ashlar; original position in the wall structure possibly vertical. *Condition*: chipping of the face; missing corner at the back.	
Mortar/plaster	Type 2 mortar remains underneath the plaster. Plaster 4–5 mm thick. *Condition*: granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges; application of mortar bands; dusting.	



After treatment (2017) *Cat. 270*

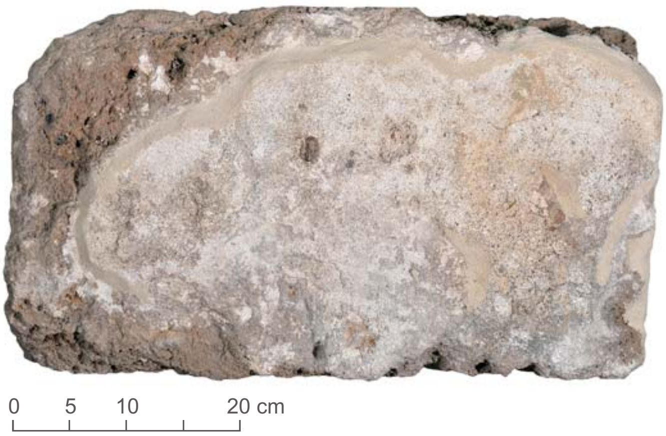


After treatment (2017) *Cat. 271*

Cat. 270 *Inv. No.* 97117	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	18 × 32 (face) × 20 cm; well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the sides. Plaster about 5 mm thick. *Condition*: grayish discoloration caused by fire; broad abrasions, especially along the edges; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	

Cat. 271 *Inv. No.* Jy1WP13	*Representation* No paint layer preserved	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	23 × 24 (face) × 13 cm; fragment of an ashlar. *Condition*: break covered with mortar, indicating damage prior to use in construction.	
Mortar/plaster	Type 2 mortar on the ashlar face and on the sides. Plaster 5–9 mm thick. *Condition*: minor abrasions and a few losses; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	

Cat. 272, 273



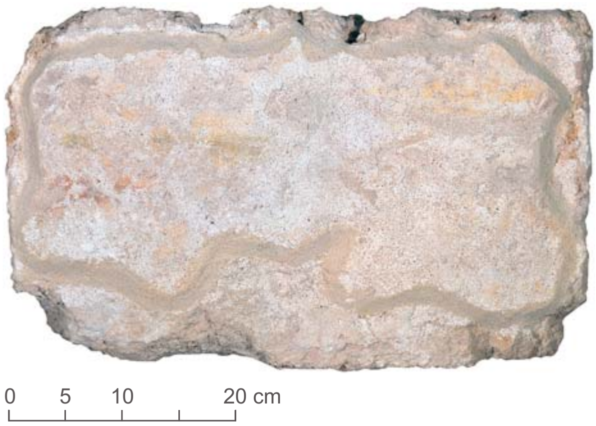
After treatment (2017) *Cat. 272*



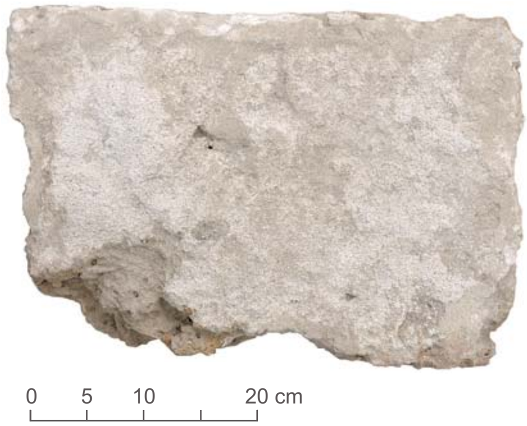
After treatment (2017) *Cat. 273*

Cat. 272 *Inv. No.* JY161WP	*Representation* No paint layer preserved; remains of painted elements in a warm gray with dark contours still observed at the time of discovery	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	33 × 58 (face) × 15 cm; roughly dressed ashlar; porous stone. *Condition*: good; some chipping of the corners and edges.	
Mortar/plaster	Type 2 mortar on the sides of the ashlar. Plaster about 3 mm thick; folded over the right-hand edge, continuing on the side of the ashlar. *Condition*: severely abraded surface; broad losses; granular disintegration of plaster; discoloration of the plaster caused by black lichen.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	

Cat. 273 *Inv. No.* –	*Representation* No paint layer preserved	
	Provenance Residential district	*Discovery / transport to Beiteddine* 2000s / 2016
Stone	25 × 39 (face) × 17 cm; small, well-dressed ashlar. *Condition*: good.	
Mortar/plaster	Type 2 mortar on the sides. Plaster 6–8 mm thick; directly on stone. *Condition*: numerous losses; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	



After treatment (2017) *Cat. 274*

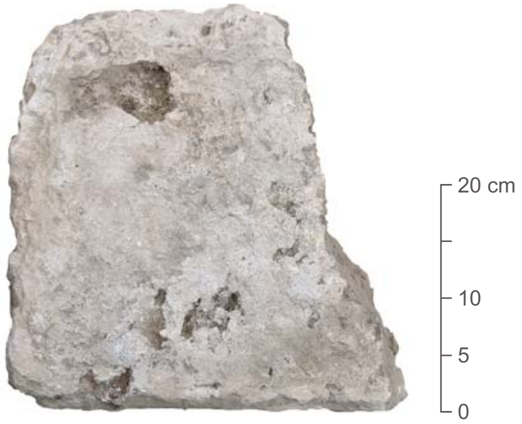


After treatment (2017) *Cat. 275*

Cat. 274 *Inv. No.* 98507	*Representation* Some faint traces of paint	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	32 × 50 (face) × 10 cm; well-dressed ashlar. *Condition*: back side trimmed; minor losses along the edges.	
Mortar/plaster	Type 2 mortar on the ashlar face. Plaster 5–7 mm thick. *Condition*: severely abraded; shallow losses and scuffs; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of plaster edges and abraded areas; application of mortar bands; dusting.	

Cat. 275 *Inv. No.* 98498	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 45 (face) × 14 cm; well-dressed ashlar; porous stone. *Condition*: bottom left corner missing, fresh break.	
Mortar/plaster	Remains of Type 2 mortar along the perimeter of the ashlar face. *Condition*: plaster surface completely abraded; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of abraded areas of the plaster; dusting.	

Cat. 276, 277



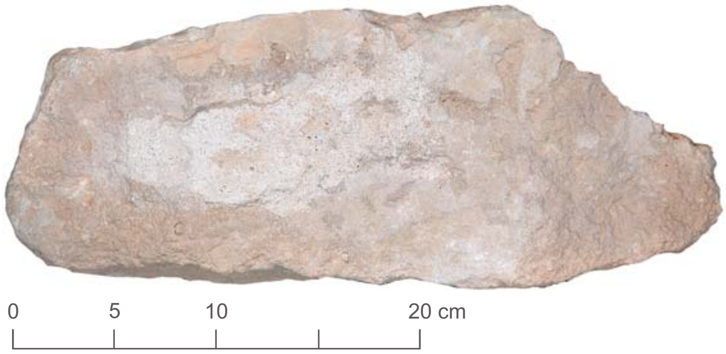
After treatment (2017) *Cat. 276*



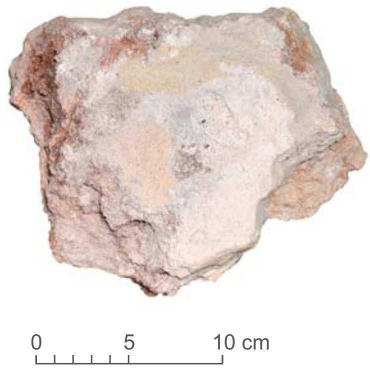
After treatment (2017) *Cat. 277*

Cat. 276 *Inv. No.* 98500	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	34 × 35 (face) × 11 cm; fragment of an ashlar. *Condition*: broken on the right side, fresh break; otherwise in good condition.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. *Condition*: plaster surface completely abraded; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of abraded plaster; dusting.	

Cat. 277 *Inv. No.* 98534	*Representation* No paint layer preserved	
Fig. 3-1	*Provenance* Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 39 (face) × 15 cm; roughly dressed ashlar; coarse conglomerate built of large bioclasts; a kind of groove along the right side. *Condition*: fresh-looking crack on the back.	
Mortar/plaster	Type 2 mortar remains on the sides of the ashlar. *Condition*: plaster surface completely abraded; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of abraded plaster; dusting.	



After treatment (2017) *Cat. 278*



After treatment (2017) *Cat. 279*

Cat. 278 *Inv. No.* 98577	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	15 × 35 (face) × 7 cm; possibly fragment of an ashlar. *Condition*: back side trimmed; one broken corner found in the storeroom; fresh break.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face. *Condition*: plaster surface completely abraded; granular disintegration of plaster.	
Treatment	Disinfection; consolidation of abraded plaster; dusting.	

Cat. 279 *Inv. No.* 98570	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	14 × 18 (face) × 19 cm; broken corner of an ashlar; very porous and crumbly stone. *Condition*: fresh breaks; no match with the other ashlars.	
Mortar/plaster	Type 2 mortar remains on the sides. *Condition*: small, abraded fragment of plaster; granular disintegration of the plaster.	
Treatment	Disinfection; consolidation of abraded plaster; dusting.	

Cat. 280, 281



After treatment (2017) *Cat. 280*



After treatment (2017) *Cat. 281*



Longer side of the ashlar with the trident-shaped groove, viewed in raking light; left, shorter side with remains of plaster

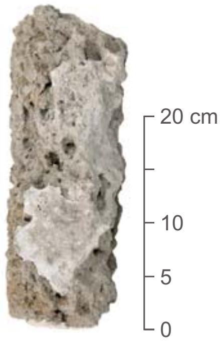
Cat. 280 *Inv. No.* 97091	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	36 × 54 (face) × 20 cm; large, well-dressed ashlar; diagonal toolmarks on the face. *Condition*: back side broken, fresh break.	
Treatment	Disinfection; dusting.	

Cat. 281 *Inv. No.* 98491	*Representation* No paint layer preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	29 × 40 (face) × 17 cm; well-dressed ashlar; one side irregular; trident-shaped groove carved on its face; slightly trapezoidal in shape when viewed from the shorter side. *Condition*: one corner missing; otherwise in good condition.	
Mortar/plaster	Type 2 mortar on the sides. Small patch of plaster preserved on one of the shorter sides. *Condition*: granular disintegration of plaster.	
Treatment	Disinfection; consolidation of abraded plaster; dusting.	

Cat. 282, 283, 284



Cat. 282



Cat. 283
After treatment (2017)



Cat. 284

Cat. 282

Inv. No. 98525

	Representation No plaster preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	28 × 39 (face) × 19 cm; L-shaped ashlar; inside corner 12 × 18 cm. *Condition*: chipping along the edges.	
Mortar/plaster	Type 2 mortar remains along the edges. *Condition*: scant remains of severely abraded plaster on the face.	
Treatment	Disinfection; dusting.	

Cat. 283

Inv. No. 98541

	Representation No plaster preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 10 (face) × 36 cm; roughly dressed ashlar; very porous, pumice-like stone; original position in the wall structure possibly vertical. *Condition*: crumbly; disintegrating.	
Mortar/plaster	Type 2 mortar remains on the short side.	
Treatment	Disinfection; dusting.	

Cat. 284

Inv. No. 97098

Fig. 3-6

	Representation No plaster preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	28 × 37 (face) x 18 cm; well-dressed, compact ashlar. *Condition*: one corner missing; damage appears old; fresh-looking loss on the back side.	
Mortar/plaster	Type 2 mortar remains along the perimeter of the ashlar face and on its sides.	
Treatment	Disinfection; dusting.	

Cat. 285, 286, 287



Cat. 285



Cat. 286
After treatment (2017)



Cat. 287

Cat. 285 *Inv. No.* 97001	*Representation* No plaster preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	35 × 44 (face) × 18 cm; roughly dressed ashlar; very porous, pumice-like stone. *Condition*: losses at the corners, damage appears old.	
Mortar/plaster	Type 2 mortar on all sides of the stone.	
Treatment	Disinfection; dusting.	

Cat. 286 *Inv. No.* 98542	*Representation* No plaster preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	30 × 15 (face) × 15 cm; fragment of a roughly dressed ashlar; porous stone. *Condition*: one side broken, fresh break; no match with the other ashlars.	
Mortar/plaster	Type 2 mortar on the face and the sides of the ashlar.	
Treatment	Disinfection; dusting.	

Cat. 287 *Inv. No.* 98567	*Representation* No plaster preserved	
	Provenance Basilica	*Discovery / transport to Beiteddine* 1987 / about 1987
Stone	21 × 29 (face) × 9 cm; fragment of a roughly dressed ashlar. *Condition*: broken, fresh break; back side trimmed.	
Mortar/plaster	Type 2 mortar on the face and sides.	
Treatment	Disinfection; dusting.	

CONCORDANCE OF WALL PAINTING FRAGMENTS

A. By catalog number

Cat.	Inv. No.		Provenance	Sample
1	PCMA-DGA	JY9WP13	Residential district	
2		not inventoried	Residential district	
3		not inventoried	Residential district	
4	DGA	98574	Residential district	
5		not inventoried	Residential district	
6		not inventoried	Residential district	
7	PCMA-DGA	JY3WP	Residential district	
8	DGA	97010	Basilica	
9	DGA	98545	Basilica	
10		not inventoried	Residential district	
11	PCMA-DGA	JY11WP13	Residential district	
12	PCMA-DGA	JY76WP	Residential district	
13	DGA	98537	Basilica	
14	DGA	97105	Basilica	
15	PCMA-DGA	JY6WP12	Residential district	
16	PCMA-DGA	JY11WP12	Residential district	
17		not inventoried	Residential district	
18	DGA	98560	Basilica	
19	DGA	98561	Basilica	
20	DGA	98524	Basilica	
21	DGA	98489	Basilica	
22	DGA	97139	Basilica	
23	PCMA-DGA	JY12WP12	Residential district	
24	PCMA-DGA	JY92WP	Residential district	
25	PCMA-DGA	JY93WP	Residential district	
26		not inventoried	Residential district	
27	PCMA-DGA	JY66WP	Residential district	
28	PCMA-DGA	JY45WP	Residential district	
29	PCMA-DGA	JY164WP	Residential district	
30a	DGA	98543	Basilica	
30b	DGA	97132		
30c	DGA	98508		
30d	DGA	98526		

Cat.	Inv. No.	Provenance	Sample
31a	PCMA-DGA JY16WP12	Residential district	
31b	PCMA-DGA JY73WP		
31c	PCMA-DGA JY74WP		
31d	PCMA-DGA JY71WP		
32	not inventoried	Residential district	
33	not inventoried	Residential district	
34	PCMA-DGA JY67WP	Residential district	
35	PCMA-DGA JY97WP	Residential district	
36	DGA 98533	Basilica	
37a	PCMA-DGA JY62WP	Residential district	
37b	PCMA-DGA JY59WP		Jy002
38	PCMA-DGA JY46WP	Residential district	
39	PCMA-DGA JY54WP	Residential district	Jy003
40	not inventoried	Residential district	
41	PCMA-DGA JY15WP12	Residential district	
42	DGA 98547	Basilica	
43	DGA 98521	Basilica	
44	not inventoried	Basilica	
45a	DGA 97094	Basilica	
45b	DGA 98529		Jy025
45c	DGA 98548		
46	PCMA-DGA JY4WP12	Residential district	
47	not inventoried	Residential district	
48	DGA 98531	Basilica	
49	DGA 98502	Basilica	
50 (I)	PCMA-DGA JY96WP	Residential district	Jy030
50 (II)	PCMA-DGA JY98WP		
51	PCMA-DGA JY102WP	Residential district	
52	PCMA-DGA JY8WP12	Residential district	
53	not inventoried	Basilica	
54a (I)	DGA 97129	Basilica	
54a (II)	DGA 97136		
54b	DGA 97127		
55	not inventoried	Residential district	
56	PCMA-DGA JY70WP	Residential district	
57	PCMA-DGA JY2WP12	Residential district	
58	PCMA-DGA JY30WP12	Residential district	
59a	DGA 98495	Basilica	
59b	DGA 98501		
60	DGA 97089	Basilica	
61	PCMA-DGA JY95WP	Residential district	
62	PCMA-DGA JY60WP	Residential district	Jy006, Jy007

Cat.	Inv. No.		Provenance	Sample
63		not inventoried	Residential district	
64		not inventoried	Residential district	
65	PCMA-DGA	JY90WP	Residential district	
66	DGA	98509	Basilica	
67	PCMA-DGA	JY99WP	Residential district	
68	DGA	98506	Basilica	
69 (I)	PCMA-DGA	JY10WP12	Residential district	
69 (II)	PCMA-DGA	JY25WP12		
70	DGA	97008	Residential district	
71	DGA	97121	Basilica	
72	DGA	98518	Basilica	
73	DGA	97104	Basilica	Jy023
74	DGA	98549	Basilica	
75	PCMA-DGA	JY2WP	Residential district	
76		not inventoried	Basilica	
77	DGA	97095	Basilica	Jy032, Jy033
78 (I)	DGA	97097	Basilica	
78 (II)	DGA	97143		
79a	DGA	97004	Basilica	
79b	DGA	97007		Jy022
79c	DGA	97005		Jy042
79d	DGA	97006		
80a	PCMA-DGA	JY75WP	Residential district	
80b	PCMA-DGA	JY107WP		
81	DGA	97109	Basilica	
82	DGA	98515	Basilica	
83a	PCMA-DGA	JY13WP12	Residential district	
83b	PCMA-DGA	A38		
84		not inventoried	Residential district	
85		not inventoried	Residential district	
86		not inventoried	Residential district	
87		not inventoried	Residential district	
88	DGA	98564	Basilica	
89		not inventoried	Residential district	
90		not inventoried	Residential district	
91	DGA	98493	Basilica	
92	DGA	98486	Basilica	
93	DGA	98528	Basilica	Jy005
94	DGA	98485	Basilica	
95		not inventoried	Residential district	
96	PCMA-DGA	JY160WP	Residential district	
97	DGA	98516	Basilica	Jy040

Cat.	Inv. No.	Provenance	Sample
98	DGA 97111	Basilica	Jy041
99	not inventoried	Residential district	
100	DGA 97002	Basilica	
101	not inventoried	Residential district	
102	not inventoried	Residential district	
103	not inventoried	Residential district	
104	DGA 97141	Basilica	
105	not inventoried	Residential district	
106	not inventoried	Residential district	
107	DGA 98490	Basilica	
108	PCMA-DGA JY24WP12	Residential district	Jy037
109	not inventoried	Residential district	
110a	DGA 98556	Basilica	
110b (I)	DGA 97128		
110b (II)	DGA 98513		
111	not inventoried	Residential district	
112	PCMA-DGA JY63WP	Residential district	
113	not inventoried	Residential district	
114	not inventoried	Residential district	
115	DGA 97114	Basilica	
116	not inventoried	Residential district	
117	not inventoried	Residential district	
118	PCMA-DGA JY87WP	Residential district	
119	PCMA-DGA JY58WP	Residential district	
120	PCMA-DGA JY79WP	Residential district	
121	DGA 97116	Basilica	
122	DGA 98483	Basilica	
123	not inventoried	Residential district	
124	DGA 97130	Basilica	
125	DGA 98566	Basilica	
126	DGA 97090	Basilica	Jy004
127 (I)	DGA 98569	Basilica	
127 (II)	DGA 98573		
128	DGA 98557	Basilica	
129	DGA 97142	Basilica	
130	PCMA-DGA JY104WP	Residential district	
131	DGA 98492	Basilica	
132	DGA 97137	Basilica	
133	DGA 98539	Basilica	
134	PCMA-DGA JY21WP12	Residential district	
135	PCMA-DGA JY47WP	Residential district	
136	PCMA-DGA JY53WP	Residential district	

Cat.	Inv. No.		Provenance	Sample
137	DGA	98487	Basilica	
138 (I)	DGA	98572	Basilica	Jy026
138 (II)	DGA	98575		
139	PCMA-DGA	JY57WP	Residential district	
140	DGA	98565	Basilica	
141	DGA	98488	Basilica	
142	PCMA-DGA	JY55WP	Residential district	
143	DGA	97093	Basilica	
144	DGA	98544	Basilica	
145	DGA	98562	Basilica	
146	DGA	97086	Basilica	
147	PCMA-DGA	JY65WP	Residential district	
148	DGA	98552	Basilica	
149	DGA	97146	Basilica	
150	DGA	98546	Basilica	
151	PCMA-DGA	JY77WP	Residential district	
152	PCMA-DGA	JY106WP	Residential district	
153	DGA	97110	Basilica	
154	DGA	97140	Basilica	
155	DGA	97100	Basilica	
156	PCMA-DGA	JY5WP12	Residential district	
157		not inventoried	Residential district	
158		not inventoried	Residential district	
159		not inventoried	Residential district	
160	DGA	97101	Basilica	
161		not inventoried	Residential district	
162	DGA	98563	Basilica	
163	PCMA-DGA	JY69WP	Residential district	
164	PCMA-DGA	JY89WP	Residential district	
165	PCMA-DGA	JY61WP	Residential district	
166	PCMA-DGA	JY4WP13	Residential district	
167	PCMA-DGA	JY10WP13	Residential district	
168	DGA	98538	Basilica	
169a	DGA	98559	Residential district	Jy010, Jy011
169b		not inventoried		
170a	DGA	97003	Basilica	Jy028
170b	DGA	97115		
171a	DGA	98519	Basilica	
171b	DGA	98553		
172	DGA	98514	Basilica	Jy024
173a	DGA	98512	Basilica	
173b	DGA	97145		

Cat.	Inv. No.		Provenance	Sample
174a	DGA	97113	Basilica	Jy039
174b	DGA	98522		
175a	DGA	97009	Basilica	
175b	DGA	97011		
176a (I)	DGA	97106	Basilica	
176a (II)	DGA	97134		
176b	DGA	97118		
177	DGA	97144	Basilica	
178	DGA	97087	Basilica	
179		not inventoried	Residential district	
180		not inventoried	Residential district	
181		not inventoried	Residential district	
182		not inventoried	Residential district	
183		not inventoried	Residential district	
184		not inventoried	Residential district	
185		not inventoried	Residential district	
186	PCMA-DGA	JY8WP13	Residential district	
187		not inventoried	Residential district	
188	PCMA-DGA	JY7WP12	Residential district	Jy038
189		not inventoried	Residential district	
190		not inventoried	Residential district	
191		not inventoried	Residential district	
192		not inventoried	Residential district	
193a		not inventoried	Residential district	
193b		not inventoried		
193c		not inventoried		
194	DGA	98499	Basilica	
195		not inventoried	Residential district	
196	DGA	98482	Basilica	
197	DGA	98517	Basilica	
198	DGA	97131	Basilica	
199	DGA	97092	Basilica	
200	DGA	97119	Basilica	
201	PCMA-DGA	JY14WP12	Residential district	
202	DGA	97099	Basilica	Jy001
203a	DGA	97108	Basilica	
203b	DGA	97138		
204a	DGA	98505	Basilica	
204b	DGA	98558		
205		not inventoried	Residential district	
206	DGA	98568	Basilica	

Cat.	Inv. No.		Provenance	Sample
207	DGA	97096	Basilica	
208	DGA	98550	Basilica	
209	PCMA-DGA	JY4WP14	Residential district	
210	PCMA-DGA	JY80WP	Residential district	
211	PCMA-DGA	JY82WP	Residential district	
212		not inventoried	Residential district	
213	DGA	98527	Basilica	
214	DGA	98494	Basilica	Jy016, Jy017, Jy018
215	DGA	97120	Basilica	
216	DGA	97135	Basilica	
217	DGA	98530	Basilica	
218	DGA	98503	Basilica	
219 (I)	DGA	98540	Basilica	
219 (II)	DGA	98571		
220	DGA	98536	Basilica	
221	DGA	98504	Basilica	
222	DGA	98520	Basilica	
223	DGA	97112	Basilica	
224	DGA	98523	Basilica	
225	DGA	98510	Basilica	
226	PCMA-DGA	JY78WP	Residential district	Jy008, Jy009
227	PCMA-DGA	JY94WP	Residential district	
228	PCMA-DGA	JY100WP	Residential district	
229	PCMA-DGA	JY105WP	Residential district	
230		not inventoried	Residential district	
231	PCMA-DGA	JY2WP13	Residential district	
232	PCMA-DGA	JY6WP14	Residential district	
233	PCMA-DGA	JY51WP	Residential district	
234	PCMA-DGA	JY84WP	Residential district	
235	PCMA-DGA	JY3WP12	Residential district	
236		not inventoried	Residential district	
237	PCMA-DGA	JY64WP	Residential district	
238	PCMA-DGA	JY1WP12	Residential district	
239	PCMA-DGA	JY22WP12	Residential district	
240	PCMA-DGA	JY7WP13	Residential district	
241		not inventoried	Residential district	
242		not inventoried	Residential district	
243	PCMA-DGA	JY20WP12	Residential district	
244	PCMA-DGA	JY12WP	Residential district	
245	DGA	98511	Basilica	
246	DGA	97000	Basilica	Jy012, Jy013
247	DGA	97088	Basilica	Jy043

Cat.	Inv. No.		Provenance	Sample
248	DGA	98554	Basilica	
249	DGA	98551	Basilica	
250	DGA	98555	Basilica	
251	DGA	98576	Basilica	
252	DGA	97102	Basilica	Jy014, Jy015
253	DGA	97103	Basilica	
254	DGA	97107	Basilica	
255	DGA	97147	Basilica	
256	DGA	98484	Basilica	
257	PCMA-DGA	JY31WP12	Residential district	
258	PCMA-DGA	JY85WP	Residential district	
259	PCMA-DGA	JY101WP	Residential district	
260	PCMA-DGA	JY28WP12	Residential district	
261	PCMA-DGA	JY26WP12	Residential district	
262	PCMA-DGA	JY50WP	Residential district	
263	PCMA-DGA	JY68WP	Residential district	
264	PCMA-DGA	JY81WP	Residential district	
265		not inventoried	Residential district	
266	DGA	98532	Basilica	
267	DGA	98496	Basilica	
268	DGA	98535	Basilica	
269	DGA	98497	Basilica	
270	DGA	97117	Basilica	
271	PCMA-DGA	JY1WP13	Residential district	
272	PCMA-DGA	JY161WP	Residential district	
273		not inventoried	Residential district	
274	DGA	98507	Basilica	
275	DGA	98498	Basilica	
276	DGA	98500	Basilica	
277	DGA	98534	Basilica	
278	DGA	98577	Basilica	
279	DGA	98570	Basilica	
280	DGA	97091	Basilica	
281	DGA	98491	Basilica	
282	DGA	98525	Basilica	
283	DGA	98541	Basilica	
284	DGA	97098	Basilica	
285	DGA	97001	Basilica	
286	DGA	98542	Basilica	
287	DGA	98567	Basilica	

B. By provenance

Provenance	Inv. No.	Cat.	Sample
	DGA 97000	246	Jy012, Jy013
	DGA 97001	285	
	DGA 97002	100	
	DGA 97003	170a	Jy028
	DGA 97004	79a	
	DGA 97005	79c	Jy042
	DGA 97006	79d	
	DGA 97007	79b	Jy022
	DGA 97009	175a	
	DGA 97010	8	
	DGA 97011	175b	
	DGA 97086	146	
	DGA 97087	178	
	DGA 97088	247	Jy043
	DGA 97089	60	
	DGA 97090	126	Jy004
	DGA 97091	280	
	DGA 97092	199	
	DGA 97093	143	
Basilica	DGA 97094	45a	
	DGA 97095	77	Jy032, Jy033
	DGA 97096	207	
	DGA 97097	78 (I)	
	DGA 97098	284	
	DGA 97099	202	Jy001
	DGA 97100	155	
	DGA 97101	160	
	DGA 97102	252	Jy014, Jy015
	DGA 97103	253	
	DGA 97104	73	Jy023
	DGA 97105	14	
	DGA 97106	176a (I)	
	DGA 97107	254	
	DGA 97108	203a	
	DGA 97109	81	
	DGA 97110	153	
	DGA 97111	98	Jy041
	DGA 97112	223	
	DGA 97113	174a	Jy039

Provenance	Inv. No.	Cat.	Sample
Basilica	DGA 97114	115	
	DGA 97115	170b	
	DGA 97116	121	
	DGA 97117	270	
	DGA 97118	176b	
	DGA 97119	200	
	DGA 97120	215	
	DGA 97121	71	
	DGA 97127	54b	
	DGA 97128	110b (I)	
	DGA 97129	54a (I)	
	DGA 97130	124	
	DGA 97131	198	
	DGA 97132	30b	
	DGA 97134	176a (II)	
	DGA 97135	216	
	DGA 97136	54a (II)	
	DGA 97137	132	
	DGA 97138	203	
	DGA 97139	22	
	DGA 97140	154	
	DGA 97141	104	
	DGA 97142	129	
	DGA 97143	78 (II)	
	DGA 97144	177	
	DGA 97145	173b	
	DGA 97146	149	
	DGA 97147	255	
	DGA 98482	196	
	DGA 98483	122	
	DGA 98484	256	
	DGA 98485	94	
	DGA 98486	92	
	DGA 98487	137	
	DGA 98488	141	
	DGA 98489	21	
	DGA 98490	107	
	DGA 98491	281	
	DGA 98492	131	
	DGA 98493	91	
	DGA 98494	214	Jy016, Jy017, Jy018

Provenance	Inv. No.	Cat.	Sample
Basilica	DGA 98495	59a	
	DGA 98496	267	
	DGA 98497	269	
	DGA 98498	275	
	DGA 98499	194	
	DGA 98500	276	
	DGA 98501	59b	
	DGA 98502	49	
	DGA 98503	218	
	DGA 98504	221	
	DGA 98505	204a	
	DGA 98506	68	
	DGA 98507	274	
	DGA 98508	30c	
	DGA 98509	66	
	DGA 98510	225	
	DGA 98511	245	
	DGA 98512	173a	
	DGA 98513	110b (II)	
	DGA 98514	172	Jy024
	DGA 98515	82	
	DGA 98516	97	Jy040
	DGA 98517	197	
	DGA 98518	72	
	DGA 98519	171a	
	DGA 98520	222	
	DGA 98521	43	
	DGA 98522	174b	
	DGA 98523	224	
	DGA 98524	20	
	DGA 98525	282	
	DGA 98526	30d	
	DGA 98527	213	
	DGA 98528	93	Jy005
	DGA 98529	45b	Jy025
	DGA 98530	217	
	DGA 98531	48	
	DGA 98532	266	
	DGA 98533	36	
	DGA 98534	277	
	DGA 98535	268	

Provenance	Inv. No.	Cat.	Sample
Basilica	DGA 98536	220	
	DGA 98537	13	
	DGA 98538	168	
	DGA 98539	133	
	DGA 98540	219 (I)	
	DGA 98541	283	
	DGA 98542	286	
	DGA 98543	30a	
	DGA 98544	144	
	DGA 98545	9	
	DGA 98546	150	
	DGA 98547	42	
	DGA 98548	45c	
	DGA 98549	74	
	DGA 98550	208	
	DGA 98551	249	
	DGA 98552	148	
	DGA 98553	171b	
	DGA 98554	248	
	DGA 98555	250	
	DGA 98556	110a	
	DGA 98557	128	
	DGA 98558	204b	
	DGA 98560	18	
	DGA 98561	19	
	DGA 98562	145	
	DGA 98563	162	
	DGA 98564	88	
	DGA 98565	140	
	DGA 98566	125	
	DGA 98567	287	
	DGA 98568	206	
	DGA 98569	127 (I)	
	DGA 98570	279	
	DGA 98571	219 (I)	
	DGA 98572	138 (I)	Jy026
	DGA 98573	127 (II)	
	DGA 98575	138 (II)	Jy026
	DGA 98576	251	
	DGA 98577	278	
	not inventoried	44	

Provenance	Inv. No.		Cat.	Sample
Basilica		not inventoried	53	
		not inventoried	76	
Residential district	DGA	97008	70	
	DGA	98559	169a	Jy010, Jy011
	DGA	98574	4	
	PCMA-DGA	A38	83b	
	PCMA-DGA	JY1WP12	238	
	PCMA-DGA	JY1WP13	271	
	PCMA-DGA	JY2WP	75	
	PCMA-DGA	JY2WP12	57	
	PCMA-DGA	JY2WP13	231	
	PCMA-DGA	JY3WP	7	
	PCMA-DGA	JY3WP12	235	
	PCMA-DGA	JY4WP12	46	
	PCMA-DGA	JY4WP13	166	
	PCMA-DGA	JY4WP14	209	
	PCMA-DGA	JY5WP12	156	
	PCMA-DGA	JY6WP12	15	
	PCMA-DGA	JY6WP14	232	
	PCMA-DGA	JY7WP12	188	Jy038
	PCMA-DGA	JY7WP13	240	
	PCMA-DGA	JY8WP12	52	
	PCMA-DGA	JY8WP13	186	
	PCMA-DGA	JY9WP13	1	
	PCMA-DGA	JY10WP12	69 (I)	
	PCMA-DGA	JY10WP13	167	
	PCMA-DGA	JY11WP12	16	
	PCMA-DGA	JY11WP13	11	
	PCMA-DGA	JY12WP	244	
	PCMA-DGA	JY12WP12	23	
	PCMA-DGA	JY13WP12	83a	
	PCMA-DGA	JY14WP12	201	
	PCMA-DGA	JY15WP12	41	
	PCMA-DGA	JY16WP12	31a	
	PCMA-DGA	JY20WP12	243	
	PCMA-DGA	JY21WP12	134	
	PCMA-DGA	JY22WP12	239	
	PCMA-DGA	JY24WP12	108	Jy037
	PCMA-DGA	JY25WP12	69 (II)	
	PCMA-DGA	JY26WP12	261	
	PCMA-DGA	JY28WP12	260	

Provenance	Inv. No.	Cat.	Sample
Residential district	PCMA-DGA JY30WP12	58	
	PCMA-DGA JY31WP12	257	
	PCMA-DGA JY45WP	28	
	PCMA-DGA JY46WP	38	
	PCMA-DGA JY47WP	135	
	PCMA-DGA JY50WP	262	
	PCMA-DGA JY51WP	233	
	PCMA-DGA JY53WP	136	
	PCMA-DGA JY54WP	39	Jy003
	PCMA-DGA JY55WP	142	
	PCMA-DGA JY57WP	139	
	PCMA-DGA JY58WP	119	
	PCMA-DGA JY59WP	37b	Jy002
	PCMA-DGA JY60WP	62	Jy006, Jy007
	PCMA-DGA JY61WP	165	
	PCMA-DGA JY62WP	37a	
	PCMA-DGA JY63WP	112	
	PCMA-DGA JY64WP	237	
	PCMA-DGA JY65WP	147	
	PCMA-DGA JY66WP	27	
	PCMA-DGA JY67WP	34	
	PCMA-DGA JY68WP	263	
	PCMA-DGA JY69WP	163	
	PCMA-DGA JY70WP	56	
	PCMA-DGA JY71WP	31d	
	PCMA-DGA JY73WP	31b	
	PCMA-DGA JY74WP	31c	
	PCMA-DGA JY75WP	80a	
	PCMA-DGA JY76WP	12	
	PCMA-DGA JY77WP	151	
	PCMA-DGA JY78WP	226	Jy008, Jy009
	PCMA-DGA JY79WP	120	
	PCMA-DGA JY80WP	210	
	PCMA-DGA JY81WP	264	
	PCMA-DGA JY82WP	211	
	PCMA-DGA JY84WP	234	
	PCMA-DGA JY85WP	258	
	PCMA-DGA JY87WP	118	
	PCMA-DGA JY89WP	164	
	PCMA-DGA JY90WP	65	
	PCMA-DGA JY92WP	24	

Provenance	Inv. No.	Cat.	Sample
Residential district	PCMA-DGA JY93WP	25	
	PCMA-DGA JY94WP	227	
	PCMA-DGA JY95WP	61	
	PCMA-DGA JY96WP	50 (I)	Jy030
	PCMA-DGA JY97WP	35	
	PCMA-DGA JY98WP	50 (II)	
	PCMA-DGA JY99WP	67	
	PCMA-DGA JY100WP	228	
	PCMA-DGA JY101WP	259	
	PCMA-DGA JY102WP	51	
	PCMA-DGA JY104WP	130	
	PCMA-DGA JY105WP	229	
	PCMA-DGA JY106WP	152	
	PCMA-DGA JY107WP	80b	
	PCMA-DGA JY160WP	96	
	PCMA-DGA JY161WP	272	
	PCMA-DGA JY164WP	29	
	not inventoried	2	
	not inventoried	3	
	not inventoried	5	
	not inventoried	6	
	not inventoried	10	
	not inventoried	17	
	not inventoried	26	
	not inventoried	32	
	not inventoried	33	
	not inventoried	40	
	not inventoried	47	
	not inventoried	55	
	not inventoried	63	
	not inventoried	64	
	not inventoried	84	
	not inventoried	85	
	not inventoried	95	
	not inventoried	99	
	not inventoried	101	
	not inventoried	102	
	not inventoried	103	
	not inventoried	105	
	not inventoried	106	
	not inventoried	109	

Provenance	Inv. No.	Cat.	Sample
Residential district	not inventoried	111	
	not inventoried	113	
	not inventoried	114	
	not inventoried	116	
	not inventoried	117	
	not inventoried	123	
	not inventoried	157	
	not inventoried	158	
	not inventoried	159	
	not inventoried	161	
	not inventoried	169b	
	not inventoried	179	
	not inventoried	180	
	not inventoried	181	
	not inventoried	182	
	not inventoried	183	
	not inventoried	184	
	not inventoried	185	
	not inventoried	187	
	not inventoried	189	
	not inventoried	190	
	not inventoried	191	
	not inventoried	192	
	not inventoried	193a	
	not inventoried	193b	
	not inventoried	193c	
	not inventoried	195	
	not inventoried	205	
	not inventoried	212	
	not inventoried	230	
	not inventoried	236	
	not inventoried	241	
	not inventoried	242	
	not inventoried	265	
	not inventoried	273	
	not inventoried	86	
	not inventoried	87	
	not inventoried	89	
	not inventoried	90	

C. By inventory number (not inventoried fragments included)

Inv. No.	Cat.	Provenance	Sample
DGA 97000	246	Basilica	Jy012, Jy013
DGA 97001	285	Basilica	
DGA 97002	100	Basilica	
DGA 97003	170a	Basilica	Jy028
DGA 97004	79a	Basilica	
DGA 97005	79c	Basilica	Jy042
DGA 97006	79d	Basilica	
DGA 97007	79b	Basilica	Jy022
DGA 97008	70	Residential district	
DGA 97009	175a	Basilica	
DGA 97010	8	Basilica	
DGA 97011	175b	Basilica	
DGA 97086	146	Basilica	
DGA 97087	178	Basilica	
DGA 97088	247	Basilica	Jy043
DGA 97089	60	Basilica	
DGA 97090	126	Basilica	Jy004
DGA 97091	280	Basilica	
DGA 97092	199	Basilica	
DGA 97093	143	Basilica	
DGA 97094	45a	Basilica	
DGA 97095	77	Basilica	Jy032, Jy033
DGA 97096	207	Basilica	
DGA 97097	78a (I)	Basilica	
DGA 97098	284	Basilica	
DGA 97099	202	Basilica	Jy001
DGA 97100	155	Basilica	
DGA 97101	160	Basilica	
DGA 97102	252	Basilica	Jy014, Jy015
DGA 97103	253	Basilica	
DGA 97104	73	Basilica	Jy023
DGA 97105	14	Basilica	
DGA 97106	176a (II)	Basilica	
DGA 97107	254	Basilica	
DGA 97108	203a	Basilica	
DGA 97109	81	Basilica	
DGA 97110	153	Basilica	
DGA 97111	98	Basilica	Jy041
DGA 97112	223	Basilica	

Inv. No.	Cat.	Provenance	Sample
DGA 97113	174a	Basilica	Jy039
DGA 97114	115	Basilica	
DGA 97115	170b	Basilica	
DGA 97116	121	Basilica	
DGA 97117	270	Basilica	
DGA 97118	176b	Basilica	
DGA 97119	200	Basilica	
DGA 97120	215	Basilica	
DGA 97121	71	Basilica	
DGA 97127	54b	Basilica	
DGA 97128	110b (I)	Basilica	
DGA 97129	54a (I)	Basilica	
DGA 97130	124	Basilica	
DGA 97131	198	Basilica	
DGA 97132	30b	Basilica	
DGA 97134	176a (II)	Basilica	
DGA 97135	216	Basilica	
DGA 97136	54a (II)	Basilica	
DGA 97137	132	Basilica	
DGA 97138	203b	Basilica	
DGA 97139	22	Basilica	
DGA 97140	154	Basilica	
DGA 97141	104	Basilica	
DGA 97142	129	Basilica	
DGA 97143	78b (II)	Basilica	
DGA 97144	177	Basilica	
DGA 97145	173b	Basilica	
DGA 97146	149	Basilica	
DGA 97147	255	Basilica	
DGA 98482	196	Basilica	
DGA 98483	122	Basilica	
DGA 98484	256	Basilica	
DGA 98485	94	Basilica	
DGA 98486	92	Basilica	
DGA 98487	137	Basilica	
DGA 98488	141	Basilica	
DGA 98489	21	Basilica	
DGA 98490	107	Basilica	
DGA 98491	281	Basilica	
DGA 98492	131	Basilica	
DGA 98493	91	Basilica	

Inv. No.	Cat.	Provenance	Sample
DGA 98494	214	Basilica	Jy016, Jy017, Jy018
DGA 98495	59a	Basilica	
DGA 98496	267	Basilica	
DGA 98497	269	Basilica	
DGA 98498	275	Basilica	
DGA 98499	194	Basilica	
DGA 98500	276	Basilica	
DGA 98501	59b	Basilica	
DGA 98502	49	Basilica	
DGA 98503	218	Basilica	
DGA 98504	221	Basilica	
DGA 98505	204a	Basilica	
DGA 98506	68	Basilica	
DGA 98507	274	Basilica	
DGA 98508	30c	Basilica	
DGA 98509	66	Basilica	
DGA 98510	225	Basilica	
DGA 98511	245	Basilica	
DGA 98512	173a	Basilica	
DGA 98513	110b (II)	Basilica	
DGA 98514	172	Basilica	Jy024
DGA 98515	82	Basilica	
DGA 98516	97	Basilica	Jy040
DGA 98517	197	Basilica	
DGA 98518	72	Basilica	
DGA 98519	171a	Basilica	
DGA 98520	222	Basilica	
DGA 98521	43	Basilica	
DGA 98522	174b	Basilica	
DGA 98523	224	Basilica	
DGA 98524	20	Basilica	
DGA 98525	282	Basilica	
DGA 98526	30d	Basilica	
DGA 98527	213	Basilica	
DGA 98528	93	Basilica	Jy005
DGA 98529	45b	Basilica	Jy025
DGA 98530	217	Basilica	
DGA 98531	48	Basilica	
DGA 98532	266	Basilica	
DGA 98533	36	Basilica	
DGA 98534	277	Basilica	

Inv. No.	Cat.	Provenance	Sample
DGA 98535	268	Basilica	
DGA 98536	220	Basilica	
DGA 98537	13	Basilica	
DGA 98538	168	Basilica	
DGA 98539	133	Basilica	
DGA 98540	219 (I)	Basilica	
DGA 98541	283	Basilica	
DGA 98542	286	Basilica	
DGA 98543	30a	Basilica	
DGA 98544	144	Basilica	
DGA 98545	9	Basilica	
DGA 98546	150	Basilica	
DGA 98547	42	Basilica	
DGA 98548	45c	Basilica	
DGA 98549	74	Basilica	
DGA 98550	208	Basilica	
DGA 98551	249	Basilica	
DGA 98552	148	Basilica	
DGA 98553	171b	Basilica	
DGA 98554	248	Basilica	
DGA 98555	250	Basilica	
DGA 98556	110a	Basilica	
DGA 98557	128	Basilica	
DGA 98558	204b	Basilica	
DGA 98559	169a	Residential district	Jy010, Jy011
DGA 98560	18	Basilica	
DGA 98561	19	Basilica	
DGA 98562	145	Basilica	
DGA 98563	162	Basilica	
DGA 98564	88	Basilica	
DGA 98565	140	Basilica	
DGA 98566	125	Basilica	
DGA 98567	287	Basilica	
DGA 98568	206	Basilica	
DGA 98569	127 (I)	Basilica	
DGA 98570	279	Basilica	
DGA 98571	219 (II)	Basilica	
DGA 98572	138 (I)	Basilica	Jy026
DGA 98573	127 (II)	Basilica	
DGA 98574	4	Residential district	
DGA 98575	138 (II)	Basilica	Jy026

Inv. No.		Cat.	Provenance	Sample
DGA	98576	251	Basilica	
DGA	98577	278	Basilica	
PCMA-DGA	A38	83b	Residential district	
PCMA-DGA	JY1WP12	238	Residential district	
PCMA-DGA	JY1WP13	271	Residential district	
PCMA-DGA	JY2WP	75	Residential district	
PCMA-DGA	JY2WP12	57	Residential district	
PCMA-DGA	JY2WP13	231	Residential district	
PCMA-DGA	JY3WP	7	Residential district	
PCMA-DGA	JY3WP12	235	Residential district	
PCMA-DGA	JY4WP12	46	Residential district	
PCMA-DGA	JY4WP13	166	Residential district	
PCMA-DGA	JY4WP14	209	Residential district	
PCMA-DGA	JY5WP12	156	Residential district	
PCMA-DGA	JY6WP12	15	Residential district	
PCMA-DGA	JY6WP14	232	Residential district	
PCMA-DGA	JY7WP12	188	Residential district	Jy038
PCMA-DGA	JY7WP13	240	Residential district	
PCMA-DGA	JY8WP12	52	Residential district	
PCMA-DGA	JY8WP13	186	Residential district	
PCMA-DGA	JY9WP13	1	Residential district	
PCMA-DGA	JY10WP12	69 (I)	Residential district	
PCMA-DGA	JY10WP13	167	Residential district	
PCMA-DGA	JY11WP12	16	Residential district	
PCMA-DGA	JY11WP13	11	Residential district	
PCMA-DGA	JY12WP	244	Residential district	
PCMA-DGA	JY12WP12	23	Residential district	
PCMA-DGA	JY13WP12	83a	Residential district	
PCMA-DGA	JY14WP12	201	Residential district	
PCMA-DGA	JY15WP12	41	Residential district	
PCMA-DGA	JY16WP12	31a	Residential district	
PCMA-DGA	JY20WP12	243	Residential district	
PCMA-DGA	JY21WP12	134	Residential district	
PCMA-DGA	JY22WP12	239	Residential district	
PCMA-DGA	JY24WP12	108	Residential district	Jy037
PCMA-DGA	JY25WP12	69 (II)	Residential district	
PCMA-DGA	JY26WP12	261	Residential district	
PCMA-DGA	JY28WP12	260	Residential district	
PCMA-DGA	JY30WP12	58	Residential district	
PCMA-DGA	JY31WP12	257	Residential district	
PCMA-DGA	JY45WP	28	Residential district	

Inv. No.	Cat.	Provenance	Sample
PCMA-DGA JY46WP	38	Residential district	
PCMA-DGA JY47WP	135	Residential district	
PCMA-DGA JY50WP	262	Residential district	
PCMA-DGA JY51WP	233	Residential district	
PCMA-DGA JY53WP	136	Residential district	
PCMA-DGA JY54WP	39	Residential district	Jy003
PCMA-DGA JY55WP	142	Residential district	
PCMA-DGA JY57WP	139	Residential district	
PCMA-DGA JY58WP	119	Residential district	
PCMA-DGA JY59WP	37b	Residential district	Jy002
PCMA-DGA JY60WP	62	Residential district	Jy006, Jy007
PCMA-DGA JY61WP	165	Residential district	
PCMA-DGA JY62WP	37a	Residential district	
PCMA-DGA JY63WP	112	Residential district	
PCMA-DGA JY64WP	237	Residential district	
PCMA-DGA JY65WP	147	Residential district	
PCMA-DGA JY66WP	27	Residential district	
PCMA-DGA JY67WP	34	Residential district	
PCMA-DGA JY68WP	263	Residential district	
PCMA-DGA JY69WP	163	Residential district	
PCMA-DGA JY70WP	56	Residential district	
PCMA-DGA JY71WP	31d	Residential district	
PCMA-DGA JY73WP	31b	Residential district	
PCMA-DGA JY74WP	31c	Residential district	
PCMA-DGA JY75WP	80a	Residential district	
PCMA-DGA JY76WP	12	Residential district	
PCMA-DGA JY77WP	151	Residential district	
PCMA-DGA JY78WP	226	Residential district	Jy008, Jy009
PCMA-DGA JY79WP	120	Residential district	
PCMA-DGA JY80WP	210	Residential district	
PCMA-DGA JY81WP	264	Residential district	
PCMA-DGA JY82WP	211	Residential district	
PCMA-DGA JY84WP	234	Residential district	
PCMA-DGA JY85WP	258	Residential district	
PCMA-DGA JY87WP	118	Residential district	
PCMA-DGA JY89WP	164	Residential district	
PCMA-DGA JY90WP	65	Residential district	
PCMA-DGA JY92WP	24	Residential district	
PCMA-DGA JY93WP	25	Residential district	
PCMA-DGA JY94WP	227	Residential district	
PCMA-DGA JY95WP	61	Residential district	

Inv. No.		Cat.	Provenance	Sample
PCMA-DGA	JY96WP	50 (I)	Residential district	
PCMA-DGA	JY97WP	35	Residential district	
PCMA-DGA	JY98WP	50 (II)	Residential district	Jy030
PCMA-DGA	JY99WP	67	Residential district	
PCMA-DGA	JY100WP	228	Residential district	
PCMA-DGA	JY101WP	259	Residential district	
PCMA-DGA	JY102WP	51	Residential district	
PCMA-DGA	JY104WP	130	Residential district	
PCMA-DGA	JY105WP	229	Residential district	
PCMA-DGA	JY106WP	152	Residential district	
PCMA-DGA	JY107WP	80b	Residential district	
PCMA-DGA	JY160WP	96	Residential district	
PCMA-DGA	JY161WP	272	Residential district	
PCMA-DGA	JY164WP	29	Residential district	
	not inventoried	2	Residential district	
	not inventoried	3	Residential district	
	not inventoried	5	Residential district	
	not inventoried	6	Residential district	
	not inventoried	10	Residential district	
	not inventoried	17	Residential district	
	not inventoried	26	Residential district	
	not inventoried	32	Residential district	
	not inventoried	33	Residential district	
	not inventoried	40	Residential district	
	not inventoried	44	Basilica	
	not inventoried	47	Residential district	
	not inventoried	53	Basilica	
	not inventoried	55	Residential district	
	not inventoried	63	Residential district	
	not inventoried	64	Residential district	
	not inventoried	76	Basilica	
	not inventoried	84	Residential district	
	not inventoried	85	Residential district	
	not inventoried	86	Residential district	
	not inventoried	87	Residential district	
	not inventoried	89	Residential district	
	not inventoried	90	Residential district	
	not inventoried	95	Residential district	
	not inventoried	99	Residential district	
	not inventoried	101	Residential district	
	not inventoried	102	Residential district	

Inv. No.	Cat.	Provenance	Sample
not inventoried	103	Residential district	
not inventoried	105	Residential district	
not inventoried	106	Residential district	
not inventoried	109	Residential district	
not inventoried	111	Residential district	
not inventoried	113	Residential district	
not inventoried	114	Residential district	
not inventoried	116	Residential district	
not inventoried	117	Residential district	
not inventoried	123	Residential district	
not inventoried	157	Residential district	
not inventoried	158	Residential district	
not inventoried	159	Residential district	
not inventoried	161	Residential district	
not inventoried	169b	Residential district	
not inventoried	179	Residential district	
not inventoried	180	Residential district	
not inventoried	181	Residential district	
not inventoried	182	Residential district	
not inventoried	183	Residential district	
not inventoried	184	Residential district	
not inventoried	185	Residential district	
not inventoried	187	Residential district	
not inventoried	189	Residential district	
not inventoried	190	Residential district	
not inventoried	191	Residential district	
not inventoried	192	Residential district	
not inventoried	193a	Residential district	
not inventoried	193b	Residential district	
not inventoried	193c	Residential district	
not inventoried	195	Residential district	
not inventoried	205	Residential district	
not inventoried	212	Residential district	
not inventoried	230	Residential district	
not inventoried	236	Residential district	
not inventoried	241	Residential district	
not inventoried	242	Residential district	
not inventoried	265	Residential district	
not inventoried	273	Residential district	

D. By sample number

Sample	Provenance	Inv. No.	Cat.
Jy001	Basilica	DGA 97099	202
Jy002	Residential district	PCMA-DGA JY59WP	37b
Jy003	Residential district	PCMA-DGA JY54WP	39
Jy004	Basilica	DGA 97090	126
Jy005	Basilica	DGA 98528	93
Jy006 Jy007	Residential district	PCMA-DGA JY60WP	62
Jy008 Jy009	Residential district	PCMA-DGA JY78WP	226
Jy010 Jy011	Residential district	DGA 98559	169a
Jy012 Jy013	Basilica	DGA 97000	246
Jy014 Jy015	Basilica	DGA 97102	252
Jy016 Jy017 Jy018	Basilica	DGA 98494	214
Jy022	Basilica	DGA 97007	79b
Jy023	Basilica	DGA 97104	73
Jy024	Basilica	DGA 98514	172
Jy025	Basilica	DGA 98529	45b
Jy026	Basilica	DGA 98572 DGA 98575	138 (I) 138 (II)
Jy028	Basilica	DGA 97003	170a
Jy030	Residential district	PCMA-DGA JY96WP	50
Jy032 Jy033	Basilica	DGA 97095	77
Jy037	Residential district	PCMA-DGA JY24WP12	108
Jy038	Residential district	PCMA-DGA JY7WP12	188
Jy039	Basilica	DGA 97113	174a
Jy040	Basilica	DGA 98516	97
Jy041	Basilica	DGA 97111	98
Jy042	Basilica	DGA 97005	79c
Jy043	Basilica	DGA 97088	247

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Fig. 2-14. Plan of the residential district (Sector D) located east of Basilica Q; arrows indicate location of paintings discovered *in situ*: *Cat. 44* and *Cat. 76* in the basilica and *Cat. 187* and *Cat. 188* in residential Complex 8 (Courtesy of the Polish Centre of Mediterranean Archaeology University of Warsaw | plan M. Puszkarski)

Fig. 2-15. Paved street (street 8, view towards west) with a drainage channel as documented in 1975 (Photo R. Saidah)

Fig. 2-16. House in the residential district as documented in 1975, looking southward; in the foreground, rooms 4 and 2 (Photo R. Saidah)

Fig. 3-1. Construction material used at Porphyreon – *ramleh*: top, block of stone revealing diagonal marks left by masons' tools (*Cat. 173a*), view in raking light; center left, compact variant (*Cat. 277*), note fragments of shells and skeletal remains of marine organisms well-cemented by the calcium carbonate binder; center right, porous variant (*Cat. 153*), showing strata of conglomerated fragments of shells and skeletal remains of marine organisms of various size; bottom, petrographic thin section (Photos J.M. Burdajewicz; petrographic thin section A. Puchta)

Fig. 3-2. Substrate of wall paintings from Porphyreon: masonry, mortar used for the construction of the masonry (Type 1 or 2), and plaster (Drawing J.M. Burdajewicz)

Fig. 3-3. Type 1 mortar: top, in the joints of the masonry of the east wall of the basilica; center, underneath the plaster (*Cat. 197*); bottom, microphotograph showing charcoal particles (Photos J.M. Burdajewicz)

Fig. 3-4. Petrographic thin sections of samples of Type 1 mortar: left, one polarizer; right, two crossed polarizers (Photo W. Bartz)

Fig. 3-5. Type 2 mortar spread over the joints of the wall separating the northern aisle from the nave of the basilica (Photo J.M. Burdajewicz)

Fig. 3-6. Type 2 mortar: left, remains on the perimeter of *Cat. 176b*; note that the mortar does not coat the center of the ashlar face; right, remains of mortar on ashlar *Cat. 284*; note the marks left by a trowel or a similar tool used to spread the mortar over the joints; view in raking light (Photos J.M. Burdajewicz)

Fig. 3-7. Type 2 mortar: top, evidence of keying of the mortar before the application of plaster visible on the side of ashlar *Cat. 151*; bottom, potsherds pressed into the mortar; ashlar *Cat. 42* has a rough, irregular surface, hence the application of a thick levelling layer of mortar with potsherds (Photos J.M. Burdajewicz)

Fig. 3-8. Microphotographs of Type 2 mortar: top, *Cat. 70* – note the even distribution, tight arrangement and uniform sizes of aggregate grains; bottom, *Cat. 152* – piece of glass embedded in the mortar (Photos J.M. Burdajewicz)

Fig. 3-9. Petrographic thin sections of samples of Type 2 mortar, showing grains of quartz, crushed limestone, iron compounds, and bioclasts; transmitted light, crossed polarizers. Note the uniformity of filler grain size (Photos A. Puchta)

Fig. 3-10. Petrographic thin section of sample Jy009 showing fragments of shells and a nominal presence of quartz and crushed limestone; transmitted light, crossed polarizers (Photos A. Puchta)

Fig. 3-11. Application of plaster (1): top, directly on the stone (2) (*Cat. 177*); center, on top of Type 1 mortar (2) (*Cat. 37b*); bottom, on top of Type 2 mortar (2) (*Cat. 110b*) (Photos J.M. Burdajewicz)

Fig. 3-12. Microphotograph of plaster (*Cat. 70*) (Photo J.M. Burdajewicz)

Fig. 3-13. Petrographic thin sections of samples of plaster, showing numerous bioclasts, as well as accessory presences of quartz, crushed limestone, and iron compounds; transmitted light, crossed polarizers. Note the varying size of aggregates (Photo A. Puchta)

Figs 3-14. Petrographic thin sections of each layer of a three-layered substrate; transmitted light, crossed polarizers. Samples Jy016 and Jy017 display contents corresponding to plaster samples Jy006, Jy010, Jy012 and Jy014, the principal kind of aggregate being bioclasts, followed by quartz, crushed limestone, and iron compounds. Sample Jy018 (the lowermost pair) displays characteristics of Type 2 mortar, with quartz being the principal type of aggregate, followed by crushed limestone and iron compounds, and an accessory presence of bioclasts. Note the good selection of aggregates in sample Jy018 in comparison to samples Jy016 and Jy017 (Photo A. Puchta)

Fig. 3-15. Petrographic thin section of sample Jy008 showing fragments of crushed limestone, bioclasts, and a nominal presence of quartz and iron compounds; transmitted light, crossed polarizers (Photo A. Puchta)

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Credits for the illustrations in the Catalog

All photographs and tracings by the author, except for:

Cat. 1; *44* (bottom): courtesy of the Polish Centre of Mediterranean Archaeology University of Warsaw | photos R. Solecki, 2016

Cat. 12 (top); *29* (top left); *31bcd* (photos after discovery); *34* (top); *35* (top); *37a* (top); *44* (center); *76*; *130* (left); *136* (top); *165* (right); *229* (top): courtesy of the Polish Centre of Mediterranean Archaeology University of Warsaw

Cat. 137 (top); *207* (top left); *213* (top left): photos K. Chmielewski

Cat. 2; *3*; *4* (top); *10*; *17*; *32*; *33*; *40*; *47*; *55*; *63*, *64*; *84–87*; *89–90*; *95*; *99*; *101–103*; *105–106*; *108* (bottom); *111*; *113–114*; *116–117*; *123*; *157–159* (top); *161*; *169* (top); *179–185*; *187–188* (except for tracings); *189*; *191–192*; *195*; *205*; *212*: photos R. Saidah

Cat. 109 (Saidah 1977: Fig. 1 on page 42)